WATER UTILITY ENTERPRISE REPORT

Final

August 2001

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Santa Clara Valley Water District

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Water District

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AN EQUAL OPPORTUNITY EMPLOYER

August 15, 2001

Dear Board Members:

This *Water Utility Enterprise Report, Final August 2001*, summarizes the results of the water rate hearings held April 17 through May 15, 2001 and presents the water rates adopted for fiscal year 2001-02. As required by the Santa Clara Valley Water District Act, this report presents financial and water supply information. It also describes the revenue requirements that are the bases for the adopted fiscal year 2001-02 water rates.

The Water Utility's adopted rates for 2001-2002 are necessary to fully support the Board's Ends Policy 1.1, which states: "There is a reliable supply of healthy, clean drinking water." In the coming fiscal year, the Water Utility will continue design and construction work to enhance the reliability and safety of drinking water delivered from the District's three water treatment plants. In response to the recommendations of the Water Utility Performance Audit, staff have improved maintenance activities to ensure the long-term reliability of the District's assets. In order to enhance the reliability and quality of the County's state and federal water supplies, the District continues to provide leadership at the state level in the joint state-federal CALFED program.

The electric power situation in California has introduced a large measure of uncertainty for the upcoming year. Staff have completed measures to provide backup power at critical facilities, as approved by the Board. The California Public Utilities Commission has approved electricity rate increases, and the fiscal year 2001-02 budget was increased to cover anticipated costs to purchase power and to import water. In anticipation of higher power costs, the Board adopted the recommendation by staff to increase the treated water surcharge

The rates adopted for 2001-02 are consistent with the long-term projections made in 1998. The Board-adopted North County Municipal and Industrial rate for groundwater increased by six percent from $310 per acre-foot to $330 per acre-foot. Likewise, the Board-adopted South County Municipal and Industrial rate increased by eleven percent from $115 per acre-foot to $130 per acre-foot. Corresponding rates for agricultural water were adopted at $33 per acre-foot in North County and $13 per acre-foot in South County.

Additionally, the adopted surcharge rates for contract and non-contract treated water increased in 2001-02 to recoup anticipated increases in power costs. The adopted surcharge on treated water scheduled for delivery under the contracts with retail agencies increased by $10 to $80 per acre-foot. In July 1998, the Board lowered the surcharge to $0 for amounts delivered in excess of scheduled contract amounts from Rinconada Water Treatment Plant only. The Board adopted the recommendation to restore the surcharge to the 1998 level of $20 per acre-foot.

The attached report includes historical data on District water supply and demand, describes the benefits of the District's activities, and provides financial projections for the next ten years.

Sincerely,

Stanley M. Williams
Chief Executive Officer

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SANTA CLARA VALLEY WATER DISTRICT

WATER UTILITY ENTERPRISE REPORT

FINAL

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Under the Direction of

Walt Wadlow
Chief Operating Officer

AUGUST 2001

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PREFACE

This is the 30th annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District's Act, the District annually prepares a written report on the District's activities on the protection and augmentation of the water supplies of the District. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water

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I. ADOPTED WATER RATES FOR 2001-02

INTRODUCTION

The Santa Clara Valley Water District (District) is the water resource management agency providing a safe and reliable water supply to the County's nearly 1.7 million residents. The District's Water Utility budget and rate strategy for 2001-02 are designed to provide revenues to pay the full cost of the County's water supply and to address challenges to the quality of the County's drinking water.

The District's major sources of revenue are from the imposition of charges on groundwater and from contracts for the sale of treated surface water produced by its three treatment plants. The District is required by State law to assess the need for groundwater charges annually and to prepare this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements. The report must also describe the financing methods and recommended water charges for whatever zones of use the Board of Directors might establish.

In 1998, the District initiated a financing strategy to address the challenge of providing a reliable water supply, while investing over $200 million at the District's three water treatment plants and meeting increasing costs for imported water.

In 2001, California's uncertain power supplies threaten to lead to significant operating cost increases both to bring water into the County and to operate pumping stations and water treatment plants. Other uncertainties such as the District's future share of costs to implement proposed solutions to Bay-Delta water quality problems and the District's role in providing recycled water to the County will continue to pose operating and financial challenges as the century opens.

This introductory section summarizes Water Utility rates adopted for 2001-02. Details of the rate components and other charges are presented in Appendix A. Section II presents data on the County's water supply and water usage. Section III describes water supply and quality challenges facing the Water Utility and the benefits of District activities to address them. Section IV discusses the revenue required to meet needs in fiscal year 2001-2002 and provides the financial analysis for the two water charge zones. Also included in this last section is a projection of the Water Utility finances over the next 10 years.

ADOPTED WATER RATES FOR 2001-02

In 1998, the District conducted an extensive analysis of the long-term capital and operating needs of the Water Utility and prepared a 10-year projection of the water rates and revenue bond financing that would be necessary to provide a reliable, high-quality water supply to the County. Alternative rate projections were discussed extensively with the water retailers, and a decision was reached to begin a series of rate increases, expected to lead to rates 50 percent above the 1998 level by 2007. Table 1-1 shows the water rates in fiscal years 1997-98 and the rates for the first three years of this long-term plan: 1998-99, 1999-00, and 2000-01. The final column contains the adopted rates for fiscal year 2001-02.

In 1998-99, the rates for North County, Water Charge Zone W-2, were increased for the first time since July 1991 for municipal and industrial (M&I) water. The South County, Water Charge Zone W-5, M&I rate did not change until 1999-00 (the boundaries of Zones W-2 and W-5 are shown on

the Water Utility Zones map in Appendix C). As shown in Table 1-1, the groundwater charge for M&I water in the North County was raised to $310 per acre-foot for the 2000-01 fiscal year. The Board adopted staff recommendations to continue along the path of rate increases projected in 1998 and increase the groundwater charge for M&I water in the North County to $330 per acre-foot for fiscal year 2001-02.

For South County, the Board adopted an increase the groundwater charge for M&I water to $130 per acre-foot for fiscal year 2001-02. In recent years, Board policy has been to set the rates for agricultural water at 10 percent of the M&I rates, and for 2001-02, the Board adopted rates to adhere to this policy in each of the zones.

The surcharge on treated water delivered under the contracts with retail agencies was adopted to increase at $80 per acre-foot to cover the increased costs of power and chemicals. The District has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called noncontract treated water, "... at such times and such prices as determined by the District." The amount of the surcharge on noncontract water determines the economics of choosing to pump groundwater rather than purchasing treated water. In July 1998, the Board lowered the noncontract surcharge from $20 per acre-foot to $0 to encourage the use of treated water from the Rinconada Water Treatment Plant and conserve groundwater on the west side of the Santa Clara Valley basin. As fiscal year 2001-02 begins, the operating environment is complicated by the uncertainty in power availability and cost; consequently, the Board adopted the recommendation that the District resume the surcharge on noncontract water from the Rinconada Water Treatment Plant at $20 per acre-foot. The availability of noncontract water beyond June 30, 2001 will be reviewed periodically as the summer progresses.

TABLE 1-1
SUMMARY OF WATER CHARGES
(Dollars Per Acre-Foot)

	1997-98	1998-99	1999-00	2000-01	Adopted 2001-02
Zone W-2 Basic User Charge	240.00	260.00	285.00	310.00	330.00
Treated Water Surcharge					
Contract	70.00	70.00	70.00	70.00	80.00
Noncontract*	20.00	0.00	0.00	0.00	20.00
Zone W-2 Total Treated Water Charge	310.00	330.00	355.00	380.00	410.00
Contract	260.00	260.00	285.00	310.00	350.00
Noncontract*					
Zone W-2 Groundwater Charge					
M&I	240.00	260.00	285.00	310.00	330.00
Agricultural	43.75	26.00	28.50	31.00	33.00
Zone W-5 Groundwater Charge					
M&I	108.00	108.00	115.00	115.00	130.00
Agricultural	11.50	10.80	11.50	11.50	13.00

Note: Treated water is provided only in Zone W-2; the total charge for contract treated water is the sum of $330 plus $80 or $410 per acre-foot. Noncontract water , when avatlabie will be available only from the Rinconada Water Treatment Plant in 2001-02.

II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or municipal and industrial (M&I). Recorded fiscal year North County water use since 1964-65 and South County water use since 1987-88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 2-1 and 2-2. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Water use in North County, as shown in Figure 2-1, is predominantly M&I. Current projections indicate an increase in M&I use through 2020, when the total North County annual water use is projected to be 372,000 acre-feet. Agricultural water use is expected to be less than 1,000 acre-feet per year by the year 2020 in North County. This is less than 1 percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to decline to approximately 21,000 acre-feet by 2020 (see Figure 2-2). The latest projections for South County anticipate total water use of about 72,000 acre-feet by the year 2020. M&I and agricultural water uses are projected to be 51,000 acre-feet and 21,000 acre-feet that year, respectively.

The projected water usage for the County discussed above totals 445,000 acre-feet in 2020. This represents the likely outcome of many factors, including population trends, employment growth, water conservation practices, and plumbing code changes. Alternative circumstances could lead to total County water needs ranging from as low as 416,000 acre-feet to as high as 478,000 acre-feet in 2020. The lower end of this range is based on a projection of 1991 water use data, which reflects drought and recession-related behaviors. The higher end is based on predrought patterns of water use and a strong local economy.

The drought and economic downturn during the early 1990s drove a decrease in the County water use from 1987 to 1991. Our records in 1988, show the total per capita water use was 231 gallons per day. By 1991, the per capita use dropped steadily to 171 gallons per day. Once drought conditions and the economic recession eased, the County began a general upward trend in water consumption from 1992 to 1997. For this time period, the per capita water use gradually increased from 182 gallons per day to 210 gallons per day. Water use dropped in 1998 due in part to unusually wet weather early in the year, which helped reduce demand for water used in agriculture and landscaping.

Total per capita water use in 2000 is estimated at approximately 216 gallons per day. Between 1995 and 2000, per capita water use increased from 192 and 216 gallons per day, a 13% change over this five-year period.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater

subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

Sources of water supply in North County consist of locally developed water and water imported via the State Water Project, the Federal Central Valley Project (CVP) or San Felipe Division, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water and CVP water imported via the San Felipe Division. The recorded water supply in North County since 1964-65 is shown in Figure 2-3, and South County since 1987-88 is shown in Figure 2-4. Projected supplies of local, reclaimed and imported water are shown to the year 2020. Projected supply availability figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's 1997 Integrated Water Resources Plan (IWRP).

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. The District is providing financial contributions to wastewater agencies for delivery of recycled water for nonpotable uses. Future local supplies are projected to be augmented by nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act. These activities are more fully described in Section III, Benefits and Services Provided by the District.

FIGURE 2-1
NORTH SANTA CLARA COUNTY WATER USE
ZONE W-2

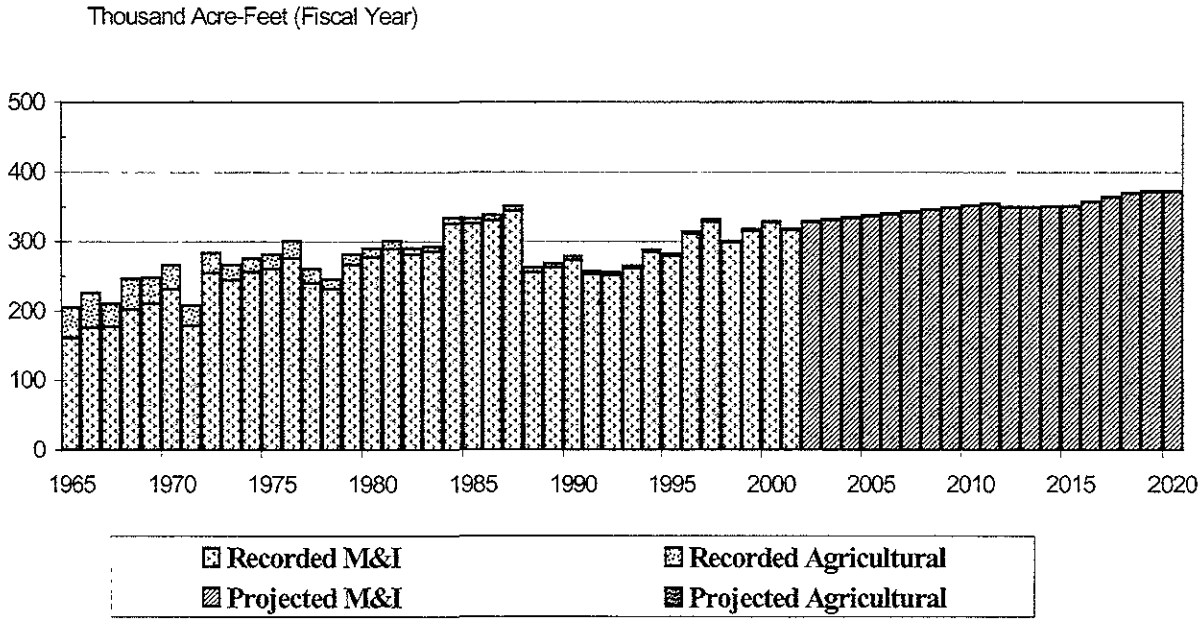


FIGURE 2-2
SOUTH SANTA CLARA COUNTY WATER USE
ZONE W-5

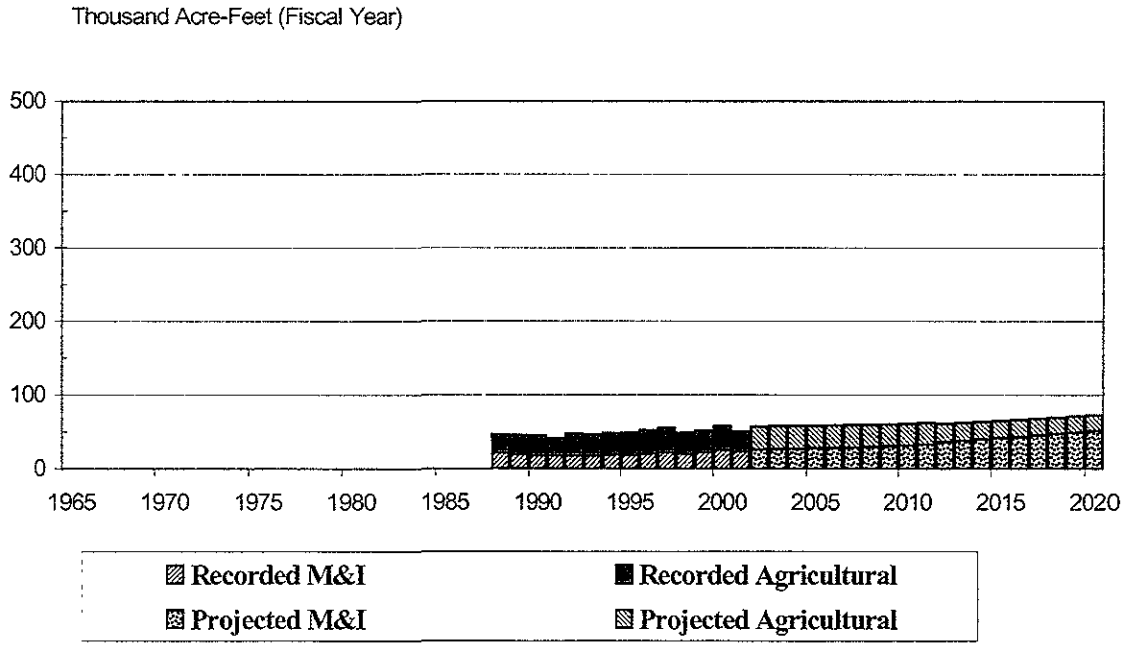


FIGURE 2-3
NORTH SANTA CLARA COUNTY WATER SUPPLY
ZONE W-2

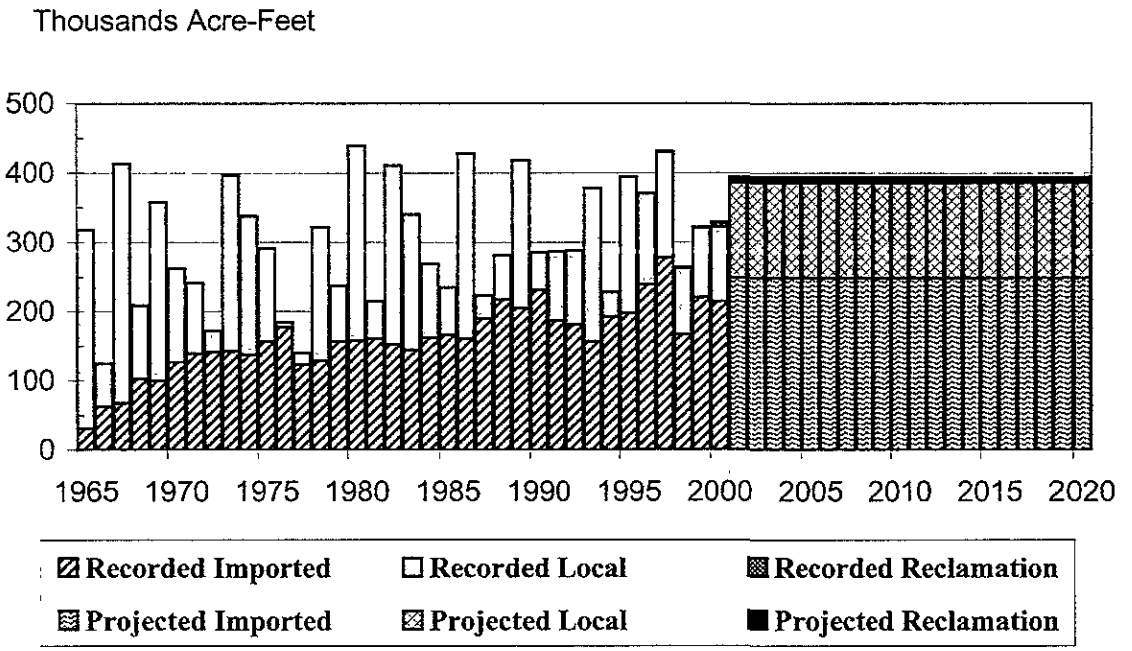
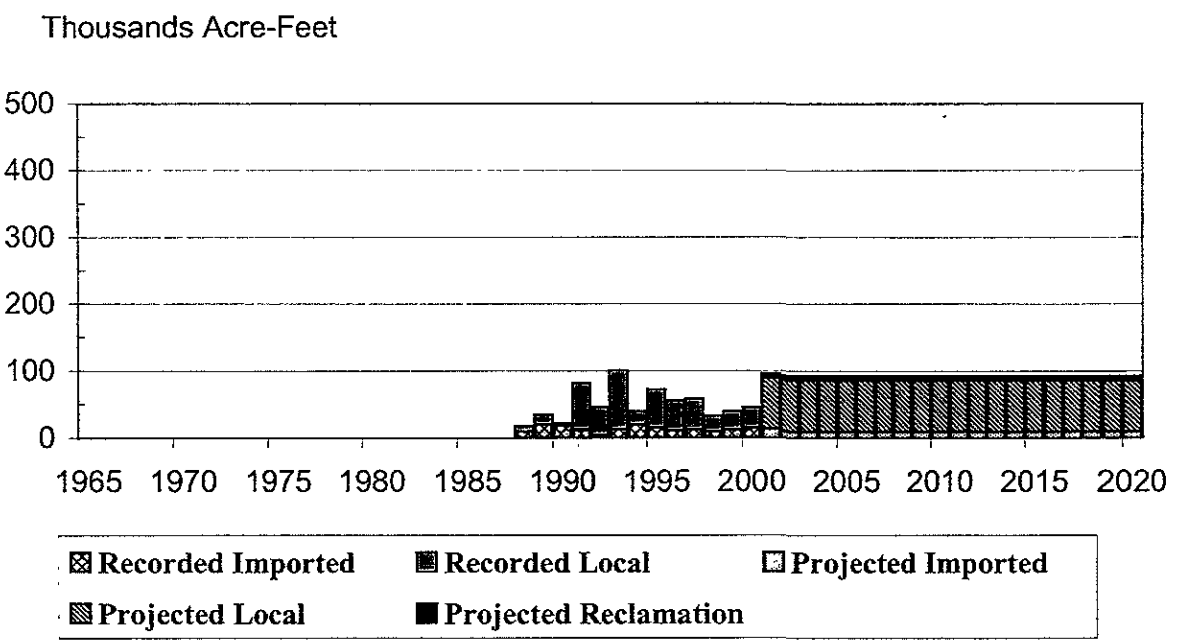


FIGURE 2-4
SOUTH SANTA CLARA COUNTY WATER SUPPLY
ZONE W-5



DISTRICT WATER SUPPLIES AND DEMANDS

The following tables show calendar year activities for 1999 and 2000 and the plan for calendar year 2001 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2-1 summarizes water demands recorded and projected in the County for calendar years 1999, 2000 and 2001. Table 2-2 documents District and non-District annual water supply and distribution management activities, and Table 2-3 summarizes District out-of-county water banking activities for those 3 years. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage. Moreover, Table 2-2 summarized only those supplies managed by the District or other agencies. The groundwater basin is also replenished by naturally occurring recharge in areas not managed by the District or others.

TABLE 2-1
WATER DEMANDS FOR CALENDAR YEARS 1999 THROUGH 2001 (ACRE-FEET)
Santa Clara County

Water Demand	Actual 1999	Actual 2000	Projected 2001
I. WATER PRODUCTION			
In-District Groundwater Pumping	160,300	167,700	171,800
District Treated Water	130,800	129,700	130,900
District Surface Water Irrigation	2,700	5,700	6,100
Non-District (Import and Local)	79,600	84,400	80,500
TOTAL WATER PRODUCTION	**373,400**	**387,500**	**389,300**
II. WATER USE			
District M&I	262,200	273,900	276,200
District Agricultural	31,600	29,200	32,600
Non-District (Import and Local)	79,600	84,400	80,500
TOTAL WATER USE	**373,400**	**387,500**	**389,300**

TABLE 2-2
ANNUAL WATER SUPPLY AND DISTRIBUTION FOR CALENDAR YEARS 1999 THROUGH 2001 (ACRE-FEET)
Santa Clara County

Water Supply	Actual 1999	Actual 2000	Projected 2001
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
SFWD Inertie			6,300
CVP Imports	117,200	91,400	138,600
State Water Project Imports	52,900	78,200	47,400
Total District Imports	170,100	169,600	192,300
Local Surface Water	*83,100*	*92,200*	*64,100*
Non-District Supplies			
Hetch Hetchy	61,000	60,900	61,000
Other Reservoirs and Streams (San Jose/Stanford)	16,700	16,400	17,600
Recycled Water	5,400	5,650	7,180
TOTAL	**336,300**	**344,750**	**342,180**
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	131,000	129,700	139,100
To Surface Water: Irrigation/Environment	14,800	13,500	10,000
To Managed Recharge			
Santa Clara Groundwater Subbasin	80,900	94,300	78,000
Coyote & Llagas Groundwater Subbasins	26,500	24,300	29,300
Subtotal of Distribution to District System	**253,200**	**261,800**	**256,400**
Non-District Distribution			
Hetch Hetchy	61,000	60,900	61,000
San Jose/Stanford	16,700	16,400	17,600
Recycled Water	5,400	5,650	7,180
Subtotal of Non-District Distribution	**83,100**	**82,950**	**85,780**
TOTAL	**336,300**	**344,750**	**342,180**

Recorded Operation for Calendar Year 1999

In 1999, the total water use in the County was 373,400 acre-feet. Rainfall in the 1998-99 season totaled 16.18 inches in downtown San Jose, about 114 percent of average. Total water use included 262,200 acre-feet of M&I and 31,600 acre-feet of agricultural water. It also included 79,600 acre-feet provided by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 160,300 acre-feet were provided through groundwater pumping and 130,800 acre-feet were delivered from our three water treatment plants. In addition, 2,700 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

To meet this demand, the District imported approximately 170,100 acre-feet of water from the State and Federal Water Projects, and released approximately 83,100 acre-feet from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with local recharge or carryover storage from our groundwater basins. Table 2-2 depicts how the water supply was managed and distributed in 1999.

Recorded Operation for Calendar Year 2000

In 2000, the total water use in the County was 387,500 acre-feet. Rainfall in the 1999-00 season totaled 13.69 inches in downtown San Jose, about 96 percent of average. Total water use included 273,900 acre-feet of M&I and 29,200 acre-feet of agricultural water. It also included 84,400 acre-feet provided by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 167,700 acre-feet were provided through groundwater pumping and 129,700 acre-feet were delivered from our three water treatment plants. In addition, 5,700 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand in 2000.

To meet this demand, the District imported approximately 169,600 acre-feet of water from the State and Federal Water Projects, and released approximately 92,200 acre-feet from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with local recharge or carryover storage from our groundwater basins. Table 2-2 presents how the water supply was managed and distributed in 2000.

Projected Operation Plan for Calendar Year 2001

The District's annual Operations Plan describes how supplies available to Santa Clara County will be used. A preliminary plan based on conditions known in June 2001 is summarized in Table 2-2. As of late July, the ten District reservoirs had a combined storage of approximately 98,366 acre-feet, or about 58.1 percent of capacity, compared to 66.6 percent in July 2000.

Imported water supplies are currently projected to be considerably less than the District's contractual entitlements. As of June 11, 2001, the Department of Water Resources announced that 35 percent of the State Water Project entitlement of 100,000 acre-feet will be available to the District. Also in mid-June, the Bureau of Reclamation announced an allocation of 45 percent for CVP agricultural water, and 75 percent for CVP M&I water available from the District's CVP contract for 152,500 acre-feet. This would result in a total supply of approximately 112,395 acre-feet of CVP water and 35,000 acre-feet of State Water Project water, for a total of 147,395 acre-feet of imported water.

In addition to current year supplies, the operations plan includes carryover water from 2000 and the SFWD intertie that accounts for the total projected imported water supplies of 188,024 acre-feet projected for 2001. However, allocations from both the CVP and SWP projects are subject to change as water supply conditions develop during the spring. If the June projections do not reach the District's anticipated deliveries, the shortfall can be made up from natural recharge and groundwater storage.

The District's 2001 Operation Plan provides projections of how District managed water (locally conserved and imported water) and other sources (Hetch Hetchy, recycled water and San Jose and Stanford stored surface water) will be distributed to efficiently use recharge facilities and provide treated water to meet demands. Table 2-2 shows the planned distribution of the projected supplies of 342,180 acre-feet for 2001. The difference between projected supplies and the projected demand shown in Table 2-1 can easily be met from natural recharge and available storage in the groundwater basins.

Banking and Reallocations

To provide reliability in future dry years, the District banks water in groundwater storage outside of the County. Primarily, the District banks State Water at the Semitropic Water Storage District in Kern County. Another 1,350 acre-feet are stored at the San Justo Reservoir in San Benito County. For 2001, it is projected that the remaining 1,350 acre-feet of San Justo banked water will be withdrawn. In 2000, the District increased our total out-of-county banked storage to an estimated 143,000 acre-feet by the end of 2000. We do not anticipate an increase in our total out-of-county banked storage in 2001. Table 2-3 shows the distribution of banked water during calendar years 1999 through 2001.

To further increase reliability against future drought, in 1997 the District executed a Water Reallocation Agreement with the US Bureau of Reclamation and agricultural districts in the San Luis and Delta-Mendota Water Authority. Under this agreement, the District has reallocated 100,000 acre-feet of CVP water to the agricultural districts. In return, the District can use a small portion of the Westlands and San Luis allocations to supplement its water supplies in years when CVP M & I allocations are less than 75 percent of the contract amounts.

In recent years, the District has exchanged CVP allocations with San Benito County, in order to improve water management by taking advantage of a difference in each district's contract year. The District purchases water for San Benito in summer months in return for San Benito returning a like amount, usually about 14,000 to 15,000 acre-feet, to the District in January and February. This agreement allows the District to "hedge" against the CVP allocating a reduced supply in the following contract year. As of March 2001, all 2000-01 water (14,000 acre-feet) has been delivered.

TABLE 2-3
DISTRICT WATER BANKING FOR CALENDAR YEARS 1999 THROUGH 2001

Water Banking	Actual 1999	Actual 2000	Projected 2001
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	93,420	120,420	141,777
Change in Storage—Bank Deposit or Withdrawal	30,000	23,730	0
Transaction Losses	-3,000	-2,373	0
Ending Balance (December 31)	**120,420**	**141,777**	**141,777**
SAN BENITO COUNTY—SAN JUSTO RESERVOIR (CVP WATER)			
Beginning Balance (January 1)	1,554	1,478	1,406
Change in Storage—Bank Deposit or Withdrawal			-1,356
Transaction Losses	-76	-72	-50
Ending Balance (December 31)	**1,478**	**1,406**	**0**
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**121,898**	**143,183**	**141,777**

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

As a public agency, the District is concerned about providing a reliable, high-quality, long-term water supply to residents of this County. As a water supplier in California's increasingly competitive water market, the District strives to provide superior services as efficiently as possible. Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water. The District is constructing facilities for the delivery of recycled water in South County, and is a partner with South Bay Recycling to promote wider use of recycled water.

This chapter describes the benefits and services that the District provides under the general heading of:

- Overall Resource Management
- Water Supply Augmentation
- Water Quality Protection
- Capital Improvements

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the water management agency and major water wholesaler for Santa Clara County, the District is responsible for planning for the County's long-term water supply. The challenge facing the District is how to ensure a safe and reliable water supply for residents in a region that experiences periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state. In response to these complex issues, the District Board endorsed a new planning approach in 1996, referred to as Integrated Water Resource Planning (IWRP), with the goal of meeting the water needs associated with future population and job growth through increased conservation, recycling, water transfers and groundwater banking. This mix of water resource options is designed to meet future water supply needs through the year 2020.

As conditions change, the IWRP provides a framework and a process for the continuing planning and development of the District's water supply program. This fiscal year (2002) the IWRP will be directly linked to Board policies to develop a variety of water supply sources to meet current and future demands. The update will include a number of ongoing planning processes and regulatory initiatives such as the CALFED Bay Delta Program, and implementation of the Central Valley Project Improvement Act and the Endangered Species Act (ESA), which may significantly affect the availability and reliability of imported water supplies. The update will also examine the local water supply outlook and account for changes in beneficial uses of stream flows for water supply and environmental purposes as a result of the ESA and the resolution of a water rights complaint filed against the District being addressed through the Fisheries and Aquatic Habitat Collaborative Effort.

The IWRP update will also provide a methodology for evaluating water supply investment choices that will include an economic analysis and risk assessment for water resource options, and a common basis for making comparisons between alternatives. This tool will assist the District in its evaluation of near-term opportunities linked to long-term investment decisions.

Stream and Watershed Management

As the water management agency in the County, the District plays a key role in balancing the water needs of a growing economy and those of the environment. The District has initiated a watershed management approach as a responsible steward of watersheds, including streams and riparian corridors. For example, in the Fisheries and Aquatic Habitat Collaborative Effort the District, partnering with the California Department of Fish and Game, National Marine Fisheries Service, U. S. Fish and Wildlife Service, Natural Heritage Institute and the City of San Jose, studied the aquatic habitats in our managed streams and the impacts on them from District facilities and operations. The goal of this effort is to develop a plan that will balance water supply needs with habitat needs of fisheries and other aquatic species.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, in-stream and off-stream groundwater recharge, as well as water transfer between facilities while avoiding or minimizing impacts to the environment. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. Examples include scheduling the work to avoid impacts to nesting birds and anadromous species, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas, and relocating fish. Access to a project work site is planned to minimize impacts.

The Water Utility uses the County's waterways to transport water to recharge facilities and for recharge in the streambeds. Since 1999, several projects have been completed to improve conditions for anadromous fish. The largest project, a fish ladder and fish screen at the Blossom Hill drop structure on the Guadalupe River, has been in operation since November 1999. By installing the Blossom Hill ladder and removing two barriers further upstream, the District has provided 19 miles of salmon and steelhead spawning habitat in the Guadalupe River. Work on additional fish ladders and screens for Masson Dam, Penitencia Creek, and Coyote Percolation Dam began in April 1999. Work on the fish ladder at Masson Dam on Guadalupe Creek was suspended during the winter season and resumed in summer 2000. Two fish ladders on Penitencia Creek, a fish ladder at the Coyote Percolation Dam and a fish screen at the Coyote Canal Diversion were also completed. A total of $4 million was appropriated in the 1998-99 budget for fish ladders, screens, and barrier removal.

Changes in land use and new developments can negatively impact water quality and District facilities. To minimize these impacts, the District's Water Resource Protection Program enforces the District's Ordinance 83-2, which regulates activities near District facilities, reviews external environmental documents, and coordinates with other agencies with regard to their land use decisions.

Flood Protection and Stream Stewardship Program

To address the community expectations and the District Board's Ends Policies on quality of life in the County, the District is proposing to use additional funding from its voter approved Special Tax to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the Clean, Safe Creeks and Natural Flood Protection Plan approved by County voters in November 2000.

The Clean, Safe Creeks and Natural Flood Protection Plan also includes outcomes for protecting water quality in our creeks and bays that will benefit water supplies. Under the program additional funding will be used to keep our creeks cleaner and free from trash. This element will also pursue improved detection and management of toxic materials (such as mercury and diazinon) and sediments that pollute our water supplies, creeks and bays.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, groundwater levels, and other information that is essential to planning and operating our water distribution and delivery system.

Government Relations

The purpose of the Government Relations Unit is to inform and engage public officials, opinion leaders, and policy makers in the work of the District. This unit establishes collaborative working relationships with policy makers at the federal, state, regional and local levels to meet the needs of mutual constituencies; builds long-term relationships with public officials, policy makers and/or their staff educating them about District services, projects, and issues; provides timely response to issues of mutual concern; advocates for District legislative issues; pursues funding for water resources and flood management projects; and serves as the advisory arm to District staff and administrators on strategies to facilitate positive relationships with elected and non-elected public officials.

Public Information and Education

Public information programs are designed to inform and educate residents about local water quality, water supply and stream stewardship issues. Such outreach programs are critical to the success of the district's overall mission, and are an important component of the water utility operations, including water conservation and resource protection programs, as they help ensure safe and reliable future supplies. The District conducts public education and information campaigns on several themes, including wise water use; water resource information; water recycling; clean, safe water; healthy creek ecosystems; and pollution prevention. To deliver this information most effectively, the office uses several media, including newsletters and brochures, advertising with local television, radio and newspaper outlets, and managing the District's comprehensive water-related Web site. In addition, the office's award-winning school program provides hands-on instruction and curriculum materials for pre-kindergarten through college-level students and educators.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District is working on programs to ensure adequate water supplies in both the short and long term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet needs in future years.

To ensure the availability of 300,000 acre-feet annually to 15 cities spread over 1,300 square miles, the Water Utility operates the following facilities:

- ten surface reservoirs with a capacity of 169,000 acre-feet
- 17 miles of canals
- 393 acres of recharge ponds
- 76 miles of controlled in-stream recharge in the County
- 142 miles of pipelines
- three water treatment plants
- three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Conveyance, Treatment, and Distribution map, Appendix C.) Major facilities include the District's ten dams and reservoirs: Anderson, Almaden, Calero, Coyote, Chesbro, Guadalupe, Lexington, Stevens Creek, Uvas, and Vasona; which conserve local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and State Water Project facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The Santa Clara Valley groundwater basin stores about one-half of the County's annual water supply for potable use. The basin is divided into three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C). The District owns and operates more than 30 recharge facilities in six major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 acre-feet.

Although groundwater subbasins are also replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the bay.

The Santa Clara subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 2000, the District replenished this subbasin with approximately 94,300 acre-feet of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the District were replenished with approximately 24,300 acre-feet of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission relative to the safety of District dams.

Imported Water

The State Water Project, Federal Central Valley Project (CVP), and City and County of San Francisco's managed supplies through the Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County, delivering water from the northern California mountains and Sierra Nevada via the Sacramento/San Joaquin Delta and the Hetch Hetchy Aqueduct. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the Pacheco Conduit, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members are currently devoting considerable time in three areas related to securing reliable supplies of imported water: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The District imports water through the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta) under contracts with the State Water Project and the Federal Central Valley Project. The Bay-Delta is the largest estuary on the West Coast of North America and supports more than 750 species of plants and wildlife. The Bay-Delta also provides water supply to over two-thirds of the population in the State and agriculture in Central Valley. However, the health of this fragile ecosystem and its water quality are in steady decline. Competing demands on a limited resource led to decades of conflicts and uncertainties in this imported supply. Furthermore, the vulnerability of delta levees to seismic and flooding failures threatens both the infrastructure and the quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues by actively participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a coalition of state and federal agencies, known as the CALFED Bay-Delta Program, has been developing a plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. The District is actively involved in the development and evaluation of this program because of the importance of the outcome on the reliability and quality of the District's imported water supplies.

After five years of planning, development and review, the CALFED Bay-Delta Program released a document titled: *California's Water Future: A Framework for Action* in June 2000. This "Framework" document outlines a specific set of actions to be implemented in the next seven years as part of the overall vision to create a balanced solution. In July 2000, CALFED released its Final Programmatic EIR/EIS (FPEIR/S). A Record of Decision (ROD) and Notice of Determination were adopted in August 2000. CALFED has begun implementing actions set forth in the ROD.

Both the "Framework" and the ROD contain solution elements that would ultimately provide improvements to the District's water supply reliability and source water quality. Among the many solution elements, the District is actively pursuing the implementation of three projects and programs: the San Luis Bypass Project Feasibility Study, the Bay Area Regional Blending/Exchange Study, and the Water Use Efficiency Program. The District is also pursuing CALFED funding to help implement projects and programs in watershed management and drinking water quality improvement.

The District is a leader in garnering broad support for the CALFED Bay-Delta Program because a successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

Banking Available Supplies for Future Use

The District's IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 acre-feet of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in years 1997 through 2000. After accounting for physical system losses in Semitropic Water Storage District, the District now has over 141,000 acre feet in storage. (See Table 2-3)

Discussions with other water contractors to reallocate entitlements and exchange of imported water have resulted in agreements that will stabilize available imported supplies through wet and dry periods.

Managing Central Valley Project Contract Issues

The District's agreement with the Bureau of Reclamation requires eventual payment of a major share of their costs for constructing the San Felipe Division of the CVP. Under the 1977 contract, the District initially paid a reduced rate for its water deliveries, in recognition of the District's need to expand its local infrastructure costs to accept CVP water. At specified times, the per acre-foot costs were scheduled to increase, the increased amount going toward payment of our share of the federal CVP capital costs (including the San Felipe Division facilities). During the deferred payback period, when per acre-foot rates were lower than the Bureau of Reclamation's actual costs, the Bureau of Reclamation tracked the shortfall and calculated interest into the obligations owed by the District and other contractors. However, the Bureau of Reclamation and the District disagreed on a number of items related to their calculation of interest, as well as federal allocation of costs related to the CVP.

While the exact repayment formulae remain under debate, the District continues to make limited payments under its 1977 contract toward the federal capital costs, but is setting aside funds to pay for its share of the San Felipe facilities in a reserve, the Bureau Repayment Appropriation. At the same time, the District is negotiating resolution of the issues that are blocking payment of the District's accumulated costs of the CVP.

By September 1996, a number of the financial issues had been resolved, and the Board approved payment of $20 million toward the District's accrued obligations to the CVP; one half of the payment was funded from the District's Bureau Repayment Appropriation.

In 1997, the District signed a binding agreement with the Bureau of Reclamation to renew its CVP contract pursuant to the provisions of the CVP Improvement Act, and at the same time reached agreement with the Bureau of Reclamation on another set of financial issues. If a renewed CVP contract is successfully negotiated, the District would be required to pay the actual cost of water service on an ongoing basis. The financial projections presented in Section IV of this report assume that future payments to the Bureau of Reclamation will fully cover the cost of service and prevent further debt increases and associated interest obligations for the District.

In 1998, the District initiated a project with other CVP M&I contractors to address the most significant and complex remaining financial issues. Significant progress was made in 2000 through two federal legislative initiatives that resolved cost allocation issues. Resolution of other issues through this joint project is expected to be completed by late 2001. This is approximately the same time frame in which the renewal of the CVP contract will be negotiated.

Water Use Efficiency: Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand. State and federally mandated conservation programs include implementing a set of Best Management Practices (BMPs) contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. Implementation of these BMPs is required by the Central Valley Project Improvement Act. Key program elements include ultra-low-flush toilet rebates and retrofits, low-flow showerhead and faucet aerator distribution, promoting water efficient landscaping, and implementing commercial/industrial/institutional and agricultural water management programs. The Water Conservation Program's goal, as identified in our IWRP, is to reduce yearly baseline water demands by a total of 74,000 acre-feet (46,000 through active savings and 28,000 through passive savings) by the year 2020. To date, the District has reduced the yearly baseline water demand by 27,000 acre-feet (7,800 through active savings and 19,200 through passive savings). Active water conservation is defined as reduced demands that are directly attributable to District programs. Passive water conservation is defined as reduced demands that are attributable to water-efficiency standards and ordinances. Because of this, what is considered active savings today may be considered passive savings in the future if a new standard or ordinance is adopted. The District's program provides financial, administrative, and technical assistance to both the water retailers and to residents and businesses within the County. As of March 31, 2001, the District has accomplished the following:

- Ultra-low-flush toilets for residents installed: 197,106
- Ultra-Low Flush Toilets for businesses installed: 5,923
- Water efficient washing machine rebates issued (for residents): 16,703
- Water efficient washing machine rebates issued (for businesses): 218

- Low-flow showerheads distributed: 93,779

- Faucet aerators distributed: 24,862;

- Large turf audits completed (Irrigation Technical Assistance Program): 385 sites signed up for program - 373 meet the potential savings criteria and received an audit. Due to winter weather as well as the contract bidding process, no new sites were reported for this quarter.

- Water-Wise House Calls (Residential Surveys) completed: 4254 SF and MF units

- Financial incentives paid to businesses for making water efficiency improvements: 26 sites, $288,723 in financial incentives resulting in 627 acre feet per year in savings.

The District is in the third year of the Mobile Lab Program, which provides county farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Water Conservation and Nitrate Management Programs continue to work closely together to ensure that efficient water use and nitrate (fertilizer) management is addressed by the Mobile Lab Program. The benefits of this program are twofold: by recommending ways to manage fertilizer and irrigation to more closely match actual crop needs, the potential for nitrate leaching into the groundwater can be reduced while maximizing water use efficiency. The recommendations are designed to maintain or improve agricultural productivity. To date, 95 sites represented by 48 farmers and growers have received the Mobile Lab field tests and twelve are scheduled for summer 2001. In addition, the District owns and operates two California Irrigation Management Information System (CIMIS) stations. CIMIS stations provide weather data that can be used to improve irrigation efficiency. The data is available to the public on our web site, or by calling the CIMIS hotline at (408) 267-3127. The water conservation and nitrate management programs also have worked together to hold various workshops, field days, and seminars in the South County on irrigation, nutrient, and pesticide management.

Several Commercial/Industrial conservation programs began in fiscal year 2000-01. The District, along with several other agencies, is offering rebates on high-efficiency commercial clothes washers. Furthermore, a contractor was hired to install ULFTs in restaurants and food stores, gas stations, and wholesale/retail stores. These audiences were targeted due to the proportionally high amount of water used per toilet. The District also co-funds Project WET (Water Efficient Technologies), along with the City of San Jose, which offers rebates to commercial and industrial water customers for the implementation of process and equipment changes, which reduce the company's wastewater discharge.

The District has operated its residential survey program since 1998 by hiring and training student interns as surveyors. This program is offered Countywide to various groundwater users and to all of the District's retailers, with the exception of San Jose Water Company, which has its own staff. This program instructs residents, property managers, and maintenance staff on how to read their meters, identify toilet leaks, and identify whether they have high flow showerheads, and/or faucet aerators (showerheads and faucet aerators are installed upon request). The surveyor then evaluates the irrigation system and provides a lawn-watering schedule along with other water conservation recommendations.

Since 1995, the District has offered a rebate to Santa Clara County residents who purchase a high-efficiency clothes washer. Beginning in July of 1999, the City of San Jose began reimbursing the District $50 for each ENERGY STAR® clothes washer installed in the service area of the San Jose/Santa Clara Water Pollution Control Plant. As a result, the District increased its rebate to $100 throughout the county.

Water Use Efficiency: Water Recycling Partnerships and Assistance

Recycled water was identified in the IWRP as one element of the preferred strategy to increase water supply reliability. The District's current approach is to develop partnerships with the cities and publicly owned treatment works that develop and/or distribute recycled water. Two major efforts are underway.

The first is to provide financial support for the distribution of nonpotable water. The District provides financial support under specified agreements to cities that develop recycled water. The District currently has agreements with the City of Sunnyvale and the South Bay Water Recycling Program. In 1997, the Board increased the District's financial support to suppliers of nonpotable recycled water from $93 per acre-foot to $115 per acre-foot.

In 1999, the District Board established an End Policy setting county wide recycled water use goals of 5% (20,000AFY) by 2010 and 10% (45,000AFY) by 2020; these goals will be reexamined during the annual review of Board policies.

The District is working with the city of San Jose on the South Bay Water Recycling Program (SBWRP), providing financial and technical support for program planning, design, construction, and inspection, and acting as a liaison with water retailers. Phase I—now complete at a cost of $140 million—consists of nearly 60 miles of transmission and distribution pipelines, pump stations, and reservoirs. SBWRP began deliveries in October 1997 and currently serve over 300 customers. Recycled water usage is expected to reach 6,000 acre-feet per year in 2001.

The second of our major efforts is an agreement with the South County Regional Wastewater Authority. These studies confirm the feasibility to restore recycled water deliveries through an existing recycled water pipeline in Gilroy. In 2000, construction was begun on a 3 million gallon per day pump station at Christmas Hill Ranch Park and a 1.4 million-gallon concrete reservoir above Eagle Ridge Golf Course in Gilroy. With these projects, the District plans to rehabilitate and operate the pipeline to deliver nonpotable water supplied by the South County Regional Wastewater Authority. The District has developed an ongoing Capital Improvement Program in the south county to improve and expand the existing system. The program for fiscal year 2001-02 is estimated to cost approximately $1.4 million and is included in the projection of South County capital costs (see Table 3-1). Recycled water usage is expected to reach 1,200 AF per year in 2003.

Other District activities include planning for large industrial, commercial and agricultural users and staff support to the Water Retailer's Recycling Subcommittee, the Agricultural Water Advisory Committee, and the Landscape Advisory Committee. Staff members also track technical and regulatory developments that affect the production and use of recycled water and participate in statewide recycling organizations and activities.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers and (2) protecting surface and groundwater resources from contamination. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below. Specific information about our water quality programs are available on our website (www.scvwd.dst.ca.us). Monthly water quality test results are also posted.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant, Rinconada Water Treatment Plant, and Penitencia Water Treatment Plant, which provide high-quality treated water to the residences and businesses in the County.

Reflective of its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. This is accomplished by evaluating treatment plant facilities, processes, operating and maintenance procedures and management oversight practices, and then implementing appropriate improvement measures. Participation in this program has already yielded impressive results. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

The District is near completions of improvements to the purification processes at each of its three treatment plants, in response to two relatively new federal Safe Drinking Water Act (SDWA) amendments: the Interim Enhanced Surface Water Treatment Rule and the Disinfectant/Disinfection By-Product Rule, announced in December 1998. The official compliance date for these amendments is December 2001, which allows time for necessary plant modifications. The planned changes in the process for water treatment will reduce the incidence of harmful by-products that can occur when surface waters containing organic materials are disinfected with chlorine.

Disinfection using oxidants such as liquid chlorine or chloramines is an important step in the purification of drinking water. The destruction of disease causing organisms by disinfection has been in widespread use since the early 1900s and has eliminated outbreaks of water-borne diseases such as cholera and typhoid in this country. Maintaining trace levels of chlorine or chloramine in drinking water after it leaves the treatment plant (called residual disinfection) provides the added benefit of preventing microbial growth in the pipelines throughout the distribution system. Disinfection by-products are compounds that can form when natural organic matter in water reacts with chemicals used for disinfection. Some disinfection by-products, such as trihalomethanes, are suspected to have long-term health effects, which is a major reason the SDWA amendments were written.

Capital Improvements at the Water Treatment Plants

The District is currently upgrading all three of its drinking water treatment plants in two stages by installing improved methods of treatment to meet these new drinking water regulations. Stage 1 changes include ferric chloride and potassium permanganate chemical feed systems, as well as flash mixing improvements at each plant. Additionally, powdered activated carbon chemical feed systems will be installed at Penitencia Water Treatment Plant (PWTP) and Rinconada Water Treatment Plant (RWTP). At RWTP, a warehouse will be installed. And, at PWTP, there will be structural modifications, a tube settler replacement, corrosion protection, process and filter controls modifications, and replacement of asphalt liner in the two washwater recovery ponds. Some of the Stage 1 strategies include delaying chlorination, which reduces the formation of by-products by limiting the time that chlorine is in contact with organic materials and enhancing coagulation, which improves the removal of organic materials before the chlorination process. Work at Rinconada Water Treatment Plant and Santa Teresa Water Treatment Plant will be complete in 2001. Due to the significant landslide and seismic protection work at Penitencia Water Treatment Plant, work will be extended to 2002. The estimated cost for Stage 1 is $39 million.

Stage 2 of the planned work will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water and to further improve water quality. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. The design is underway and the $176 million capital improvement project is scheduled for completion in 2007.

To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory (see Table 3-1 for construction schedule). The facility will replace the 30-year old Rinconada laboratory and will more reliably and cost-effectively monitor the quality of our water supplies.

An additional approach to managing residuals from treatment processes is to reduce the organic content of source water. The water imported by the District through the Delta has high levels of organic compounds from agricultural drainage and urban discharges. A major objective of the District's participation in the CALFED Bay-Delta Program is to improve the source quality of water available as import from the Delta. A discussion of the District's participation in the CALFED process is presented elsewhere in this report. The District is also participating in a CALFED-sponsored Bay Area Regional Blending/Exchange Study to investigate opportunities for water quality improvements through partnership in regional facilities or exchanges.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. This includes all existing regulations and provisions of the SDWA Amendments of 1996, the California SDWA, and any provisions of the District's treatment plants' operating permits from the California Department of Health Services. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the quality of the County's sources of water.

Methyl Tert-Butyl Ether

A continuing threat to the drinking water supply is the gasoline additive called methyl tert-butyl ether (MTBE). MTBE is a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act. The State Air Resources Board mandated the year-round statewide use of reformulated gasoline in 1996. Since November 1996, the District, in partnership with the County's water retailers, has engaged in an aggressive monitoring program to track the occurrence of MTBE in the County's water supplies. In November 1997, the District confirmed the presence of small amounts of the chemical in water entering and leaving one of its three treatment plants. Traces of the additive have been found in one water retailer's well; this well was removed from service. Currently, MTBE is nondetectable in the local public water supply.

The human health effects of ingesting MTBE-contaminated water are not well known. However, the United States Environmental Protection Agency has labeled MTBE a "possible" human carcinogen and has issued a drinking water advisory of 20 to 40 ppb to protect public health and for taste and odor concerns. The California Department of Health Services' Office of Drinking Water has established a secondary maximum contaminant level for MTBE of 5 ppb. Secondary standards are set for aesthetic qualities (taste and odor). In May 2000, the Department of Health Services' Office of Drinking Water implemented a primary maximum contamination level of MTBE of 13 ppb to protect public health.

The District is aggressively pursuing long-term solutions to this potential problem through a two-pronged approach. A high level of effort is being expended to prevent more of the contaminant from entering public water supplies. In addition, we have expanded our legislative and outreach efforts (through our Government Relations and Public Information Units) to restrict the use of MTBE as a gasoline additive. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasoline by the end of 2002.

The Board of Directors sent a letter to the Santa Clara County Board of Supervisors, recommending a countywide prohibition against the sale or distribution of gasoline containing MTBE or other ether oxygenates. In July 2000, the Board of Supervisors, rather than adopting the prohibition, sent a letter to Governor Davis supporting his efforts to phase out MTBE use in California.

Monitoring will continue at our reservoirs, treatment plants, and in all of the District's groundwater subbasins. The District completed a focused groundwater MTBE monitoring study in December 2000. The study focused on sampling shallow and deep wells in areas vulnerable to groundwater contamination, based on hydrogeology and the density of wells, underground storage tank sites and operating service stations. Samples were collected and analyzed from approximately 100 wells throughout the County. No reportable concentrations of MTBE were detected in any of the study wells. The District will continue monitoring groundwater for MTBE, but will reduce the sampling frequency and the number of wells in the program.

The District conducted a pilot study to determine if MTBE releases are occurring at sites that comply with new standards for underground storage tanks. MTBE was detected in groundwater at 13 of the 28 sites that were studied. In addition, the District completed a detailed study of 16 leaking underground storage tank sites to determine if undetected releases are occurring and identify potential weaknesses in fuel storage, management, and delivery operations. As a result of the study, the Regional Water Quality Control Board is requiring groundwater sampling for MTBE at approximately 50 operating gasoline storage facilities.

To protect local surface water supplies from MTBE, the District is working with Santa Clara County Parks and Recreation on a program to manage the number of gasoline-powered watercraft allowed on three District reservoirs. The goal of the program is to ensure that concentrations in the reservoirs do not surpass our target of 3 parts per billion. In May 2000, the District and Santa Clara County Parks and Recreation Department began requiring the use of gasoline produced without MTBE in all watercraft on District-owned reservoirs.

Nitrate Management

A different threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than 6 months of age. Nitrate contamination is a particular concern in the southern portion of the County. The District has designed a Nitrate Management Program to monitor nitrate occurrence, reduce nitrate exposure, and reduce nitrate loading in the Llagas and Coyote groundwater subbasins of South County.

To monitor nitrate occurrence, the District has established a network of 57 wells throughout the South County study area. These wells are sampled on a quarterly basis to determine if there are any seasonal and/or areal trends. The District has installed 10 groundwater monitoring wells to supplement the monitoring newtwork. Network wells have been monitored quarterly since February of 1999. Based on the analysis of the data, we may decrease the frequency of monitoring and/or install additional wells.

To reduce exposure to nitrate, the District offers a free nitrate analysis to all private water supply well users. Since 1998, over 600 tests have been conducted. More than half the wells tested have exceeded the maximum contaminant level of 45 milligrams per liter of nitrate (mg/L NO_3). Test recipients are given a copy of the results along with a fact sheet detailing what nitrate is, where it comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination. The fact sheet is also posted on the District's web page.

The District is currently working with the Department of Environmental Health on a Well Owner's Guide that will discuss proper well construction, maintenance, protection, and monitoring. When completed, the guide will be mailed to all well owners.

To reduce nitrate loading, the District has launched a public education program. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. We worked with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service to produce several seminars/workshops on nutrient, irrigation and pesticide management. Over 290 people have attended the 10 seminars/workshops we have offered since July of 1998. The District offers free irrigation system evaluations to help local growers improve irrigation efficiency and free soil nitrate test kits to help local growers improve fertilizer management. The District worked with nearby

counties facing similar problems to produce and distribute fact sheets on nitrogen and water management in agriculture. In addition, the District is a cooperator on a grant with a soil scientist to establish field trials demonstrating and evaluating the effectiveness of in-field nitrate testing in drip and sprinkler-irrigated vegetables. All of the agricultural information, including a calendar of events and links to other resources, are posted on the District's web page.

The District plans to expand the outreach program to home gardeners/landscapers and livestock owners. A series of fact sheets are being produced in cooperation with the Loma Prieta Resource Conservation District and the University of California Cooperative Extension for the rural home owner. We hope to work with the County's new Natural Resource Advisor on an equine manure management workshop.

Groundwater Guardian

The District has been designated as a Groundwater Guardian by the Groundwater Foundation based on our groundwater protection efforts. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting. Our planned activities include encouraging and supporting community outreach and protection efforts, developing public outreach and education materials, and continuing to provide technical assistance for groundwater protection activities.

Underground Storage Tank Fuel Cleanup Program

The District oversees the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as MTBE from leaking underground storage tanks.

Over 2,300 fuel leak cases have been reported in the County, and 70 percent of these cases have received regulatory closure from the State Water Resources Control Board, the San Francisco Bay or Central Coast Regional Water Quality Control Boards, or the District. The District is currently overseeing 543 tank sites in North County and 25 sites in South County. To date, 1,588 sites in North County and 69 sites in South County have been closed. The remaining open sites are overseen by the Regional Water Quality Control Boards, with the exception of six sites that receive oversight from the City of Gilroy.

The majority of the active cases are associated with releases of gasoline. MTBE has been detected at more than 371 of the active gasoline tank sites. MTBE has been detected at very low concentrations in at least one large public water supply well, one water well that supplies a local school district, and several private wells. The District conducts studies to understand the hydrology and the direction of the water flow in the aquifers. Based on these studies the district prioritizes those sites that pose the greatest risk to the groundwater basin and will take immediate action to correct the sites which have the greatest potential for contamination of the water wells.

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Water Code.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During the first three quarters of Fiscal Year 2000-01, the District:

- permitted 1,680 wells and other deep excavations for construction or destruction
- inspected 1,372 wells and other deep excavations constructed or destroyed
- registered 683 wells
- provided drilling services to the owners of 9 abandoned wells

HAZMAT Emergency Response Program

To prevent contamination of the County's water supply from hazardous materials, the District manages the investigation, analysis, removal, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of source areas such as reservoirs, recharge ponds, and creeks.

Urban Runoff Program

The District has dedicated efforts to improve the quality of storm water runoff as a member of the Santa Clara Valley Urban Runoff Program. Efforts such as this improve the quality of storm water that flows into streams in Santa Clara Valley. The District participates in this program as 1 of 15 copermittees under a single Clean Water Act permit from the Regional Water Quality Control Board. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of this program. For instance, the permit renewal fee is $10,000 per year. Combining 15 agencies under one permit saves $140,000 per year and requires that only one set of annual reports be prepared and submitted to the Regional Water Quality Control Board, rather than 15.

CAPITAL IMPROVEMENTS

Capital improvement projects in progress include the expansion and upgrade of the Raw Water Control System, the repair of the landslide on the Santa Clara Tunnel, the Stage I Water Treatment Plant upgrades. The Stage II Water Treatment Plant upgrades are currently being designed; construction is scheduled to begin during the 2001-02 fiscal year and end approximately during fiscal year 2006-07. Table 3-1 shows the funding for capital projects for 2001-02 and the next 4 fiscal years. The cumulative investment between 2001-02 and 2005-06 is projected to total over $220 million.

TABLE 3-1
CAPITAL IMPROVEMENT PROJECTS - FISCAL YEAR 2000-01 THROUGH 2005-06
(Millions of Constant 2001 Dollars)

	FY 01 Adj Budget	01/02 Biennial Budget	02/03 Biennial Budget	03/04 Projection	04/05 Projection	05/06 Projection
SOURCE OF SUPPLY						
So County Recycled Water Impro	4.4	0.2	0.1			
Recycle Wtr Connect-SC Conduit		0.2	0.4	1.5		
Recycle Wtr PL Rehab Cord/SCRW		1.1	0.1	0.5		
Water Facilities Sign Project	0.1	0.1	0.1			
Pacheco PS Restroom Facility	0.1					
San Luis Bypass & Storage		2.3	3.8	5.0	3.7	
Santa Clara Tunnel Landslide	0.1					
Coyote Pump Plant Canopy		0.2				
Almaden Dam Outlet	0.2	1.0	1.0	0.4	4.7	
Fellow's Dike Rehabilitation	0.3	0.4	0.6	0.5	4.9	
Lenihan Dam Outlet Mods	0.2	0.2	1.3	0.5	11.6	
Total Capital Projects	5.3	5.7	7.4	8.3	24.9	
RAW WATER TRANSMISSION & DISTRIBUTION						
Central PL Protect at Route 87	0.1	0.0	0.0			
Central P/L Mods at Capitol Ave. & Berryessa	0.0	0.2				
Vasona Restroom Modification	0.0	0.0	0.0	0.4	0.0	
Almaden Valley PL Cathodic Ptn	0.1					
Raw-Water Control System	0.7	1.0	0.1			
Coyote Canal Ext Abandon/ Kirk Ditch	0.2	0.0	0.0	0.0	0.0	0.0
Almaden Calero Canal	2.7	0.4	0.6	0.3	0.6	0.3
San Pedro Recharge Facility	0.8	0.3	0.1	0.0	0.0	0.0
Total Capital Projects	4.6	2.0	0.7	0.8	0.6	0.3
WATER TREATMENT						
Various Penitencia WTP projects	0.5	1.0	1.1	3.4	0.5	0.2
Penitencia WTP Treatment Improv Stage 1	1.8	1.8	0.2			
Penitencia WTP Treatment Improv Stage 2	18.6	0.7	14.3	22.1	1.2	0.5
Various Santa Teresa WTP projects	0.4	1.3	1.0	4.9	1.1	0.3
Santa Teresa WTP Treatment Improv Stage 1	0.3	0.3	0.0			
Santa Teresa WTP Treatment Improv Stage 2	13.3	0.9	17.8	15.8	0.9	0.4
Various RinondaWTP projects	0.4	3.3	9.0	10.9	0.6	0.3
Rinconada WTP Treatment Improv Stage 1	0.6	0.5	0.1			
Rinconada WTP Treatment Improv Stage 2	12.4	1.2	25.2	14.7	0.8	0.3
New Water Quality Laboratory	6.4	0.2	0.1	0.2		
Penitencia WTP Operations building Modifications and Expansion				0.4	1.0	0.5
Penitencia Filter Backwash/Disinfection/Screening					0.0	1.6
Rinconada Filter Backwash/Disinfection/Screening					0.1	2.4
Santa Teresa Filter Backwash/Disinfection/Screening					0.0	2.1
Upflow Clarifier Inlet Valves					0.0	0.3
Total Capital Projects	54.7	11.2	68.8	72.4	6.2	8.9
TREATED WATER TRANSMISSION & DISTRIBUTION						
Treated Wtr T&D Inst Upgrade	0.1	0.2	0.0			
San Tomas Injection Well	0.1					
SCVWD SFWD Intertie	0.1	0.1	0.1			
Milpitas Pipeline Relocation	0.4					
PWTP Modulating Valve	0.0	0.6	0.3			
Rinconada Res Roof Rehab	0.9	0.4	0.6	0.0		
Snell Pipeline Cathodic Prot		0.0	0.1	0.1		
Treated Water Air& Vacuum Valve				0.3	1.2	2.9
Total Capital Projects	1.6	1.4	1.1	0.4	1.2	2.9
CAPITAL PROJECTS	**66.2**	**20.3**	**78.1**	**81.9**	**32.8**	**12.1**

Note: Zero represents a value less than $50,000

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's ends policies and to present a funding approach. Section I reported the recommended rates for 2001-02. Section IV describes the multiyear financial analysis and the funding approach that serves as the foundation for the recommended rates in each zone. The proposed funding includes a series of increases in water rates in each zone for the next 10 years, combined with additional debt financing. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

Between 1988 and 1993, a statewide drought limited water supplies and required extensive conservation, leading to more efficient use of available supplies. To maintain revenues over this period, the M&I rate increased 160 percent for the North County and 400 percent for the South County. When the rains returned in 1993, the Board lowered rates by roughly 10 percent for the fiscal year starting July 1, 1993.

The Water Utility's revenue requirements remained relatively stable for the period from 1993 to 1998. In 1998, the utility was on the threshold of initiating a series of capital investments required to comply with new water quality regulations. Concurrently, the District was beginning negotiations to renew its water purchase contract with the Bureau of Reclamation. Consequently, the District embarked on a series of rate increases that have seen the M&I groundwater rate in North County increase from $240 per acre-foot in FY 1997-98 to $330 per acre-foot in effect in 2001-02.

The current outlook is for continued rate increases to meet major maintenance outlays as well as investments in electric power facilities to ensure the reliability of District water treatment capacity. Section III, describes these challenges and other issues that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in the next several years, as the utility invests over $220 million in capital improvements from fiscal years 2002 to 2006.

The financial outlook does not include any estimates of the costs for implementing proposed solutions to the Bay-Delta water quality problems or potential District investments in future recycled water facilities in the North County. As discussed in Section III, these items and others are in the conceptual planning stages and include a wide range of potential program costs and facility investments.

REVIEW OF DISTRICT'S FINANCES FOR 1999-00, 2000-01, 2001-02

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using revenue bond proceeds and allowing for funds added to, or used from reserves.

The District's financial plans are designed to carry out the direction of the Board's Ends Policy 1.1, "There is a reliable supply of healthy, clean drinking water." Some of the major increases in the 2001-02 budget reflect the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements. Table 4-1 shows the revenue requirements for capital, operations and other activities for 1999-00, 2000-01 and 2001-02.

Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. Appendix B gives a description of each of the Water Utility Reserve Funds. In 1999-00, reserves were drawn down by $27.1 million to fund capital appropriations.

The cost of water purchased from the federal and state projects continues to be a major budgetary item, budgeted at $25 million per year for the next two years. The annual cost of CVP water could increase by another $3 million to $5 million after the District's contract is renewed. Any budgeted funds that are not paid out to the CVP for water purchases are set aside in a reserve, while negotiations are underway with the Bureau of Reclamation to settle on the amount of the District's accrued costs.

During 1999-00 significant operating outlays totaling $6.8 million were made in the following continuing programs:

- $4.6 million for expanded efforts in Water Conservation Program
- $0.6 million for Fisheries and Aquatic Habitat Collaborative Effort.
- $1.6 million for efforts to combat the threat of MTBE contamination of the groundwater basin

Design and construction of capital improvements mainly directed at enhancing the safety of drinking water delivered from the District's three water treatment plants are underway. In 1999-00, construction began on Stage I improvements at an estimated cost of $26.2 million, and the Stage II design contract of $15.0 million was awarded. In 2000-01 the total Water Utility capital appropriation is $66.2 million, $54.7 million of which is for the water treatment plants, including $44.3 million is appropriated for Stage II improvements alone. For 2001-02, capital appropriations total $20.3 million, of which $11.0 million goes to further design and construction efforts at the water treatment plants.

In 2000-01, the Water Utility issued revenue bonds to raise $54.5 million in financing for the capital improvement plan. For the next five years, the District will continue use both reserves and revenue bonds in conjunction with increasing water rates to meet revenue requirements occasioned by capital improvements totaling $230 million (in current dollars) for the next five fiscal years, 2002 though 2006.

The Water Utility recently completed a thorough review of its capital assets that identified significant needs to upgrade many treatment plant systems that were not directly included in the process revisions planned as part of the Stage 1 and Stage 2 work. The updated CIP includes newly identified projects at Rinconada, involving the in-plant water system, filter systems, clearwell and reservoir. This work and an update of Stage 2 construction costs have resulted in a near doubling of the utility's projected capital need for fiscal years 2002 through 2006.

TABLE 4-1
OVERVIEW OF WATER UTILITY REVENUE REQUIREMENTS
($ Millions)

Revenue Requirements	Actuals 1999-00	Estimated 2000-01	Projected 2001-02
Operations	61.6	65.7	84.1
Water Purchases			
Federal Water	12.2	9.2	15.0
State Water	11.0	11.0	10.3
Extraordinary Items (Includes ISMP & CVP pymt)		2.9	20.5
Capital Projects	55.5	66.2	20.3
TOTAL REQUIREMENTS	**140.3**	**155.0**	**150.2**
Add/Subtract Changes in Reserves	(27.1)	12.7	(9.9)
Less Revenue Bond Proceeds		54.5	22.7
Less Projected Carryover		6.6	
Net Requirements From Water Utility Revenues	**113.2**	**106.6**	**117.6**

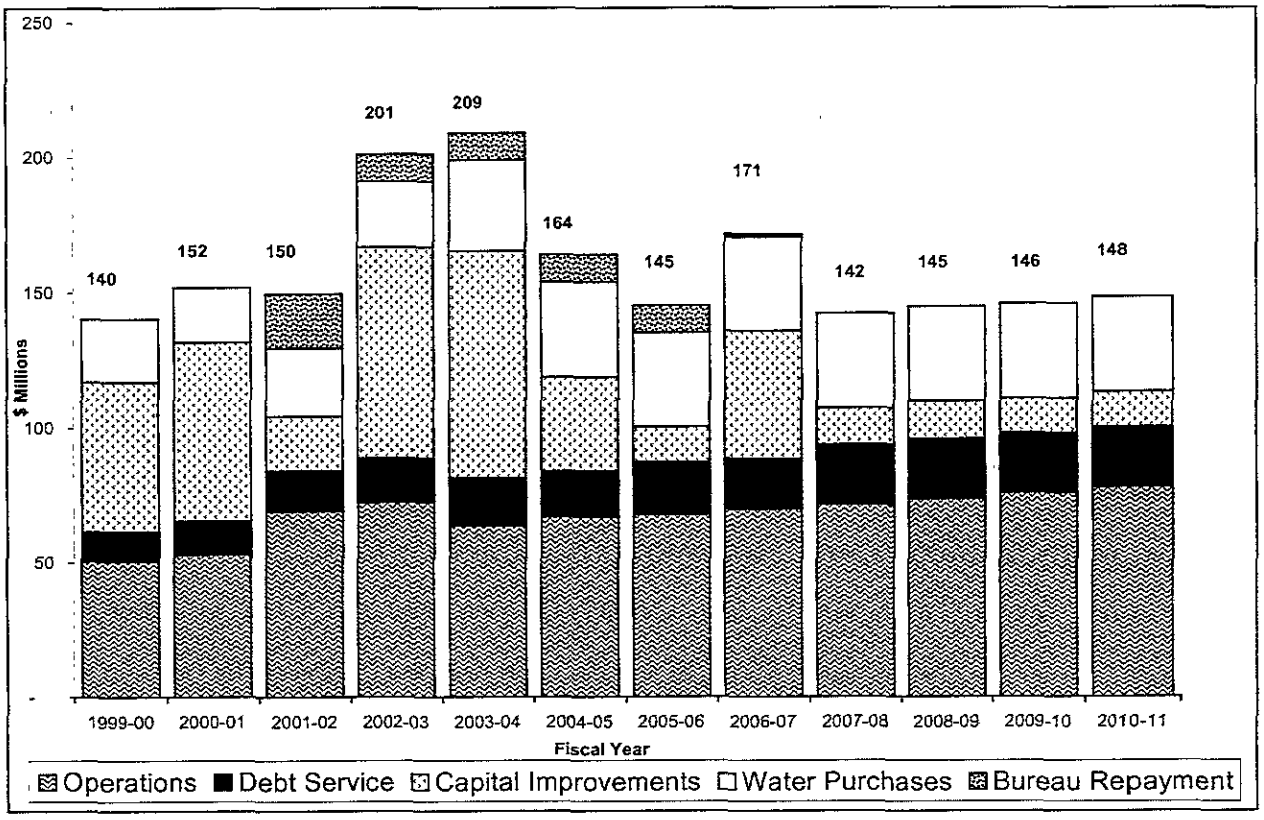
For the year 2001-02 Table 4-1 shows total requirements of $150.2 million to be met from a combination of current revenues, reserves, and long-term debt. The adopted rates shown in Table 1-1 are projected to produce approximately $96.9 million in revenues from water usage. Property taxes are projected to be $13.9 million, and interest earnings and other revenue are projected to be $6.7 million for a total of $117.6 million. The projection for 2001-02 relies on revenue bond proceeds and reserves to complete the funding for 2001-02.

Table 4-1 also shows an extraordinary payment of $20.5 million planned for fiscal year 2001-02. Approximately $20.0 million of this is for an anticipated payment toward the District's accumulated costs of water from the San Felipe Division of the CVP. Since 1989-90, the Water Enterprise has reserved moneys in the Bureau Repayment Appropriation for this purpose. The table shows a net decrease in reserves of $10 million because of planned additions to capital and operating reserves partially offset the $20.5 million in the Bureau Repayment Reserve.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next 10 years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. The continuing appropriations for the capital investment needed to comply with water quality regulations are underway at the three water treatment plants can be seen in the capital portion of the bar for 2000-01. Expenditures are projected to level off in 2001-02 because of a temporary reduction in capital needs, while previous appropriations and borrowed funds are spent down. Large capital appropriations are planned for 2002-03 and 2003-04 to fund numerous construction contracts planned to begin in those years.

FIGURE 4-1
Ten-Year Program—Projected Expenditure



Projected payments to the Bureau of Reclamation for the District's share of the San Felipe Division of the CVP contribute to the magnitude of projected outlays for 2001-02 and five subsequent years. The timing of these payments depends on the terms of the final settlement and the Bureau of Reclamation's schedule to finalize accounting for water deliveries.

Annual operation expenditures are projected to increase significantly in 2001-02 as the utility steps up its maintenance program and increases staffing at the treatment plants. Longer term, water treatment costs are projected to increase as the ozonation processes come on line at the completion of the Stage 2 construction. The long-term costs of electric power are a significant uncertainty at the

present time. For the next two years, price spikes are expected and are anticipated in our budgeting. If the state is successful in restoring stability to the electric power markets in California, future power costs may not be significantly higher than previously forecast.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

To provide for the financial needs projected for the next 10 years requires a financial plan that combines current revenues (from water sales), revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $230 million for capital facilities and equipment between fiscal years 2002 and 2006; therefore, additional debt financing is planned each year through FY 2004-05 for future capital improvements. Table 4-2 below shows the funding sources for capital projects from year 2002 through 2006.

TABLE 4-2
CAPITAL IMPROVEMENT PROJECTS FUNDING SOURCES
FISCAL YEAR 2000-01 THROUGH 2005-06
(Millions of dollars)

Water Utility Capital Improvement Projects $ Millions	00/01 Adjusted Budget	01/02 Adopted Budget	02/03 Adopted Budget	03/04 Projection	04/05 Projection	05/06 Projection
Funding Sources						
Current Revenue	11.7		7.4	8.8	7.5	9.0
Reserves			4.7	5.1		4.2
Revenue Bonds	54.5	20.3	66.0	70.2	27.3	
Total Water Utility Capital Improvements Funded (Constant Dollars)	**66.2**	**20.3**	**78.1**	**81.6**	**32.8**	**12.1**
Total Water Utility Capital Improvements Funded (Current Dollars)	**66.2**	**20.3**	**78.1**	**84.1**	**34.8**	**13.2**

Alternative approaches to meet the future financial needs of the Water Utility have been investigated and presented to the District's Board and the public during public hearings in 1998 and subsequent years. Figure 4-2 shows the water rates projections that in combination with bond financing will finance needs to 2011. Over a 7-year period, North County M& I rates are projected to increase from $240 per acre-foot in fiscal year 1998 to $380 per acre-foot in 2005, an average increase of 7 percent per year.

A financing strategy that relies on revenue bonds for meeting capital needs and provides capital reserves to moderate year-to-year increases in water rates is included in the ten-year plan shown in Table 4-3. Table 4-3 shows the projected revenues, expenditures, and reserves over the next 10 years based on proceeds from revenue bonds of $22.7 million dollars in 2001-02 and $66.0 million in 2002-03. Using revenue bond financing means that the District will see debt service rise from $12.5 million in 2000-01 to over $19 million in 2005-06. Rates are projected to continue to rise after fiscal year 2005 because of major upgrades at the District's dams and reservoirs.

FIGURE 4-2
Ten-Year Rate Projection

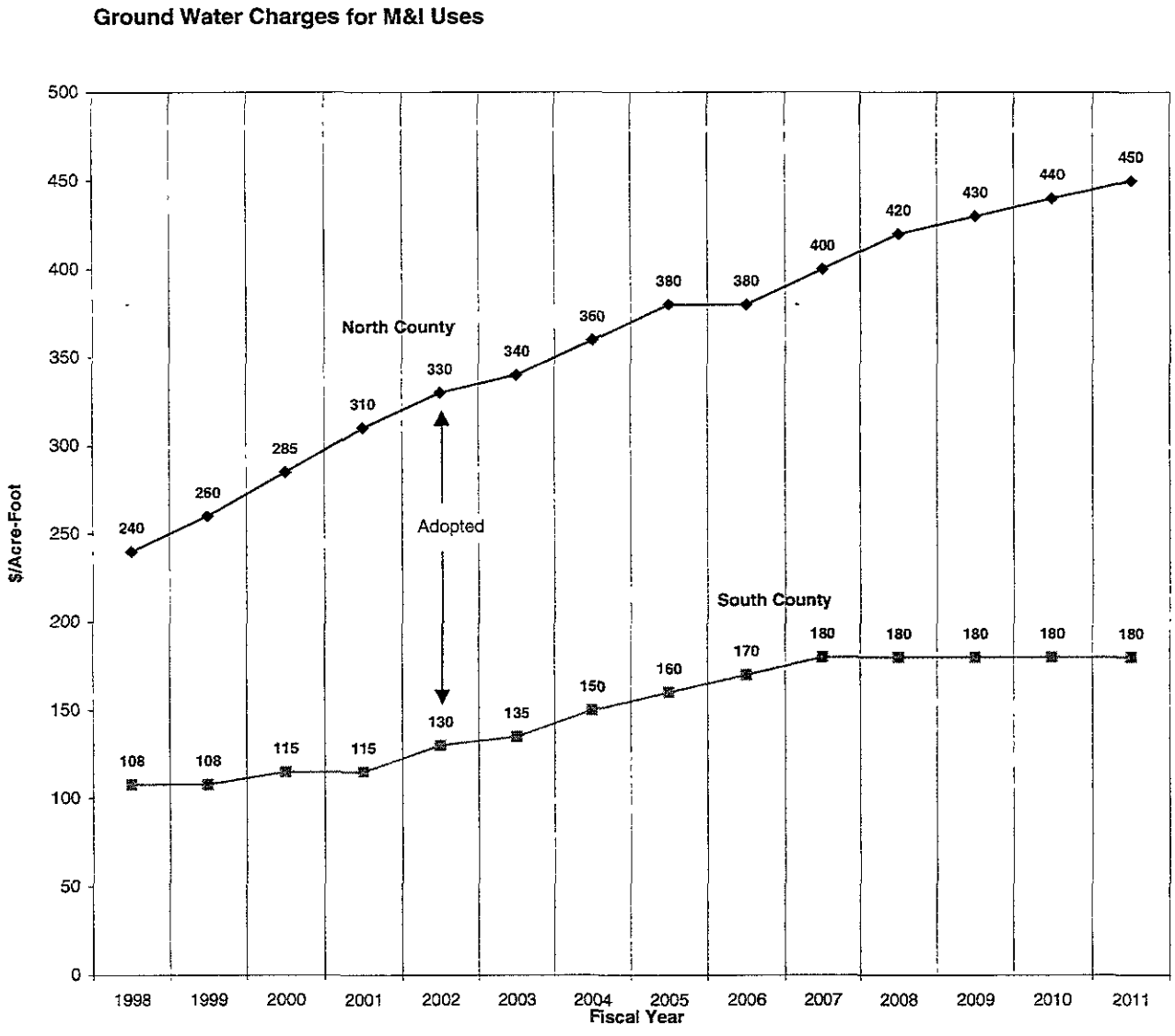


TABLE 4-3
TEN-YEAR WATER UTILITY PLAN
($ in Thousands)

	Actuals	Estimated	Adopted Budget	Planned Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
Revenue Sources:	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-2010	2010-11
Groundwater Charges	$35,033	$38,600	$40,966	$42,706	$46,274	$49,274	$49,743	$52,462	$51,802	$54,225	$55,533	$57,304
Surface/reclaimed Water Sales	$465	$196	$754	$781	$820	$879	$867	$911	$911	$951	$971	$992
Treated Water Charges	$46,090	$47,720	$52,680	$54,510	$57,610	$60,750	$62,080	$66,280	$68,150	$73,680	$76,720	$80,450
Inter-governmental services	$697	$700	$2,545	$2,536	$423	$433	$443	$453	$464	$475	$486	$498
Total Operating Revenue	**$82,285**	**$87,216**	**$96,945**	**$100,533**	$105,127	$111,336	$113,133	$120,106	$121,327	$129,331	$133,710	$139,244
Non-Operating Income.												
Property Taxes	$22,076	$13,209	$13,932	$13,433	$13,245	$13,339	$13,455	$12,727	$12,816	$12,910	$12,910	$12,910
Interest	$6,782	$5,188	$6,518	$5,979	$3,922	$3,009	$2,650	$1,925	$2,098	$1,766	$1,741	$1,971
Capital Contributions	$1,420	$690	$0	$3,700	$2,500	$2,500	$1,940	$0	$0	$0	$0	$0
Other	$426	$251	$197	$198	$198	$198	$198	$198	$198	$198	$198	$198
Total Non-Operating Income	$30,704	$19,337	$20,647	$23,310	$19,865	$19,046	$18,243	$14,850	$15,112	$14,874	$14,849	$15,079
Total Revenue	**$112,989**	**$106,553**	**$117,592**	**$123,843**	**$124,992**	**$130,382**	**$131,376**	**$134,956**	**$136,439**	**$144,205**	**$148,559**	**$154,323**
Operating Outlays:												
Operations	$70,262	$66,955	$88,907	$91,997	$95,257	$100,344	$100,784	$102,721	$104,883	$107,040	$109,170	$111,365
Operating Projects	$3,691	$6,453	$5,529	$4,992	$2,406	$1,863	$1,919	$1,976	$1,602	$1,650	$1,700	$1,750
Debt Service	$10,891	$12,462	$14,956	$16,352	$17,580	$16,956	$19,430	$18,615	$22,276	$22,272	$22,276	$22,271
Total Operating Outlays	**$84,844**	**$85,870**	**$109,392**	**$113,341**	**$115,243**	**$119,163**	**$122,133**	**$123,312**	**$128,761**	**$130,962**	**$133,146**	**$135,386**
Excess (Deficit) Revenues vs Operating Outlays	$28,145	$20,683	$8,200	$10,502	$9,749	$11,219	$9,243	$11,644	$7,678	$13,243	$15,413	$18,937
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserves	**$28,145**	**$20,683**	**$8,200**	**$10,502**	**$9,749**	**$11,219**	**$9,243**	**$11,644**	**$7,678**	**$13,243**	**$15,413**	**$18,937**
Total Capital Appropriations	**$55,488**	**$66,207**	**$20,305**	**$78,054**	**$84,318**	**$34,835**	**$13,202**	**$47,277**	**$13,557**	**$14,077**	**$12,879**	**$13,098**
Other Financing Sources/ (Uses):												
Operating Transfers Out -ISMP		($2,932)	($465)	($1,783)	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Bond Proceeds/Grants	$0	$54,516	$22,664	$63,603	$70,195	$27,258	$0	$40,887	$0	$0	$0	$0
Payment to Central Valley Project	$0	$0	($20,000)	($10,000)	($10,000)	($10,000)	($10,000)	($1,053)	$0	$0	$0	$0
Total Other Financing Sources/ (Uses)	**$0**	**$51,584**	**$2,199**	**$51,820**	**$60,195**	**$17,258**	**($10,000)**	**$39,834**	**$0**	**$0**	**$0**	**$0**
Budget Balance Available	**(27,343)**	**6,060**	**(9,905)**	**(15,732)**	**(14,374)**	**(6,358)**	**(13,959)**	**4,201**	**(5,879)**	**(834)**	**2,534**	**5,839**
Projected Carryover		6,646										
Balance Available	**(27,343)**	**12,706**	**(9,905)**	**(15,732)**	**(14,374)**	**(6,358)**	**(13,959)**	**4,201**	**(5,879)**	**(834)**	**2,534**	**5,839**
Appropriated to/(from) Reserves:												
Operating Reserves:												
Contingency Appropriation	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Working Capital Appropriation	$7,069	$7,125	$9,116	$9,445	$9,479	$9,804	$10,049	$10,216	$10,670	$10,853	$11,035	$11,222
Supplemental Water Supply Appropo.	$17	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517	$7,517
Rate Stabilization Reserve Fund	$1,000	$1,500	$2,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579	$2,579
Performance Efficiency	$6,616	$6,616	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Reserves	**$18,281**	**$26,337**	**$22,212**	**$23,541**	**$24,575**	**$24,900**	**$25,145**	**$25,312**	**$25,766**	**$25,949**	**$26,131**	**$26,318**
Capital Reserves:												
Replacement Appropriation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Designated for Future Years' Capital	$1,216	$5,866	$17,726	$13,023	$7,614	$10,932	$6,728	$11,815	$5,482	$4,466	$6,817	$12,469
Construction Reserves	$0	$0	$2,359	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Capital Reserves	**$1,216**	**$5,866**	**$20,085**	**$13,023**	**$7,614**	**$10,932**	**$6,728**	**$11,815**	**$5,482**	**$4,466**	**$6,817**	**$12,469**
Reserves for Contingent Liabilities:												
Bureau Repayment Appropriation	$61,053	$61,053	$41,053	$31,053	$21,053	$11,053	$1,053	$0	$0	$0	$0	$0
Total Reserves for Contingent Liabilities	**$61,053**	**$61,053**	**$41,053**	**$31,053**	**$21,053**	**$11,053**	**$1,053**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Appropriated to /(from) Reserves	**$80,550**	**$93,256**	**$83,350**	**$67,617**	**$53,242**	**$46,885**	**$32,926**	**$37,127**	**$31,248**	**$30,415**	**$32,948**	**$38,787**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of the Water Utility's revenue. In May 1998, after discussions with the water retailers and other advisory groups, the District embarked on a plan to raise the groundwater charge for North County gradually to meet the projected financial requirements. Continuing the approach agreed to with its advisory groups, the Board in May 2001, adopted a groundwater charge of $330 per acre-foot for nonagricultural (M&I) water and $33.00 per acre-foot for agricultural water for fiscal year 2001-02 (see Table 1-1).

As shown in Table 4-4, total North County costs in 2001-02 are projected to decrease by approximately $2.7 million from 2000-01 as a result of lower capital appropriations. Nevertheless, additional debt financing is projected to be necessary.

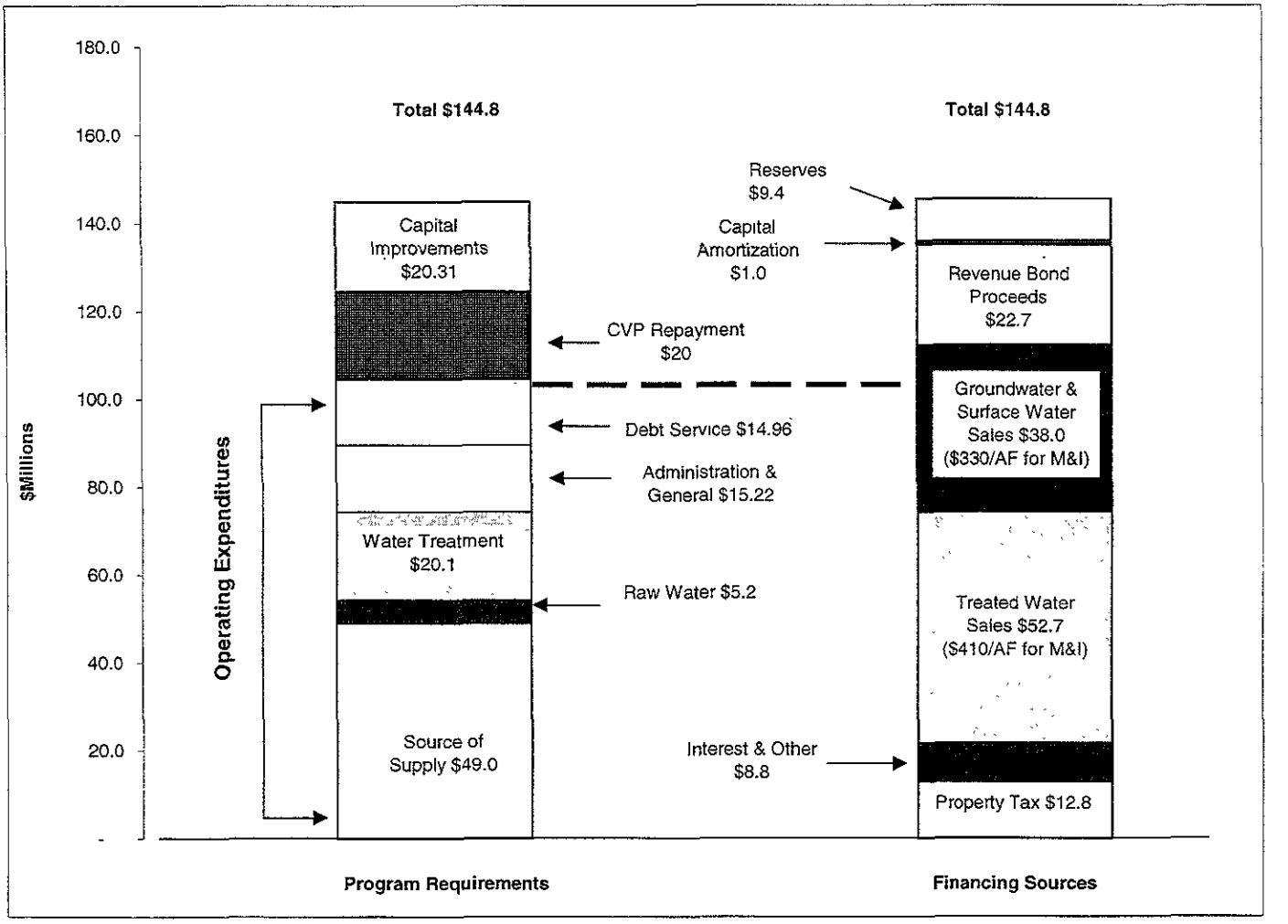
TABLE 4-4
OVERVIEW OF NORTH COUNTY FINANCES
($ Millions)

	Actual 1999-00	Adjusted 2000-01	Proposed 2001-02
Allocated Revenue	$108.26	$102.27	$112.81
Revenue Bonds	$0.00	**$54.52**	**$22.66**
Less Open Space Credit to South AG	($0.49)	($0.48)	($0.55)
Capital Amortization from South Co.	$0.56	$0.56	$1.01
Allocated Costs			
Operation	$58.63	$62.53	$80.07
Imported Water	$22.14	$18.78	$24.42
Capital Improvements	$55.49	$66.21	$20.30
CVP Repayment	$0.00	$0.00	$20.00
Total Costs	**$136.26**	**$147.52**	**$144.79**

The groundwater charges adopted by the Board for fiscal year 2001-02 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policy 1.1: "There is a reliable supply of healthy, clean drinking water."

FIGURE 4-3
Fiscal Year 2001-02
North County Water Utility Program Requirements and Financing Sources
($Millions)



SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur, but rates are adjusted only when the trend in the cumulative surplus or deficit shows a significant imbalance.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. A Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-5, the Open Space Credit received by the South County was $0.49 million in 1999-00, estimated at $0.48 million in 2000-01, and projected to be $0.55 million in 2001-02. As the M&I rates for both zones are projected to grow in the next 6 years, so will the amount of the Open Space Credit available to support agricultural water revenues.

With the rates recommended for fiscal year 2001-02, the South County deficit is estimated to be approximately $0.6 million (see Table 4-5). This would result in a cumulative deficit of $0.2 million at the end of 2001-02. The rate projection shown in Figure 4-2 is expected to result in annual deficits through 2004-05 and to return to a cumulative surplus in 2009-10.

The quantity of imported water used in South County is expected to range between 9,000 acre-feet and 12,000 acre-feet annually; Table 4-5 shows the costs of imported water are expected to be lower in 2001-02, compared to 2000-01, because projected deliveries of CVP water are lower for 2001.

The projected operating costs in South County are projected to increase to cover additional maintenance on Reach 1 of the San Felipe Division, operation of the South County recycled water pipeline, and additional operation and maintenance costs for recharge facilities. The amount for capital amortization increased because of recent capital outlays for the construction of recycled water facilities under an agreement with the South County Regional Wastewater Authority.

In addition to the tasks directly related to conveying and recharging water for South County customers, the Water Enterprise also conducts programs to protect water quality in both surface and groundwater resources. Additional programs educate both agricultural and domestic customers about water conservation methods and provide direct assistance with water audits and implementation of water-saving technology.

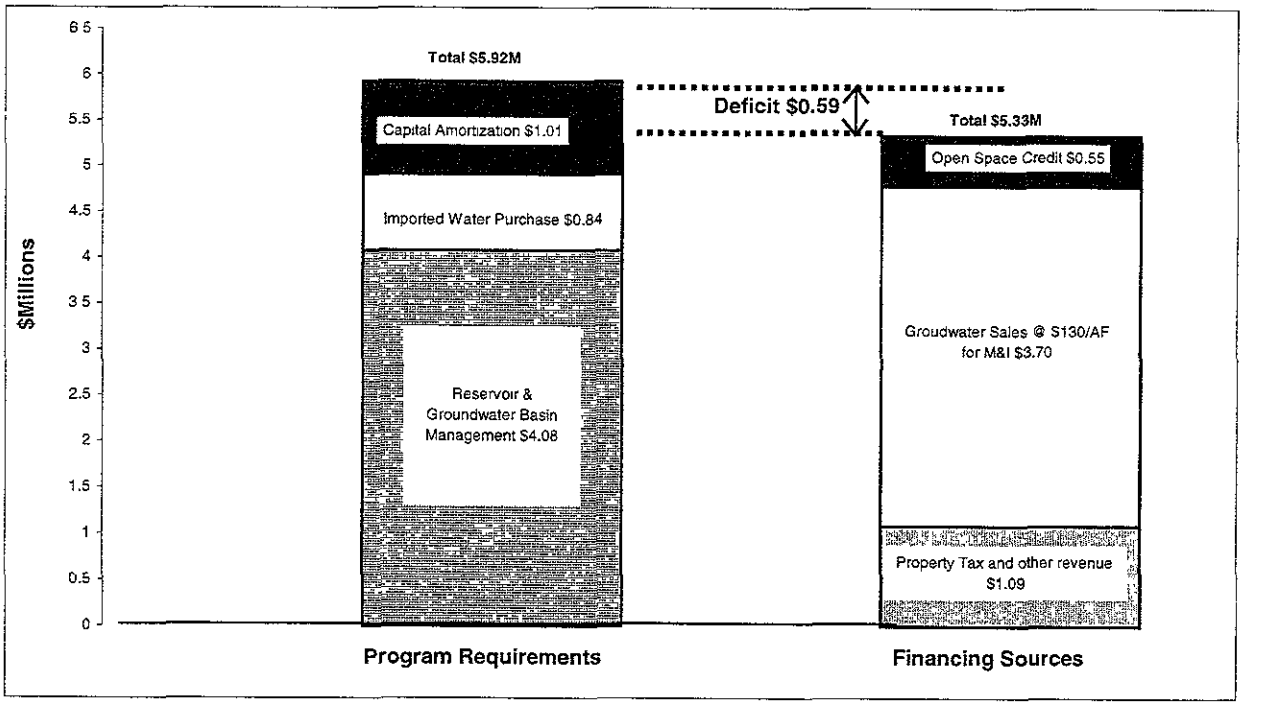
The groundwater charges adopted by the Board for fiscal year 2001-02 in Zone W-5 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-4 shows the relationship between expenditures and projected sources of revenue in South County (Zone W-5). The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policy 1.1: "There is a reliable supply of healthy, clean drinking water."

TABLE 4-5
OVERVIEW OF SOUTH COUNTY FINANCES
($ Millions)

	Actual 1999-00	Adjusted 2000-01	Proposed 2001-02
Allocated Revenue	$4.73	$4.28	$4.79
Received Open Space Credit from North County	$0.49	$0.48	$0.55
Allocated Costs			
Operation	$2.99	$3.14	$4.08
Imported Water	$1.09	$1.42	$0.84
Amortized Capital Improvements	$0.56	$0.56	$1.01
Total Cost	**$4.64**	**$5.12**	**$5.92**
Surplus (Deficit)	**$0.58**	**($0.36)**	**($0.59)**
Cumulative Balance	$0.73	$0.37	($0.22)

FIGURE 4-4
Fiscal Year 2001-02
South County Water Utility Program Requirements and Financing Sources
($Millions)



APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 2001-02

Component	Rate ($/AF)
Basic User, Zone W-2	
Agricultural	33.00
M&I	330.00
Basic User, Zone W-5	
Agricultural	13.00
M&I	130.00
Treated Water Surcharge	
Contract	80.00
Noncontract*	20.00
Water Master	11.75
Capital Cost	
Half Road Lateral System	2.75

*Note: Noncontract water was available only from the Rinconada Water Treatment Plant in 2000-01, and this is the recommendation for 2001-02.

TABLE A-2
Adopted Water Charges for Fiscal Year 2001-02

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater		
Zone W-2	$33.00	$330.00
Zone W-5	$13.00	$130.00
Surface Water[1]		
Half Road Deliveries[2]	$27.75	$144.50
Other Zone W-5 Deliveries[3]	$24.75	$141.75
Other Zone W-2 Deliveries[4]	$44.75	$341.75
Minimum Charge Zone W-5[5]	$97.50	$97.50
Minimum Charge Zone W-2[6]	$247.50	$247.5
Stored Water		
Zone W-2	$33.00	$330.00
Zone W-5	$13.00	$130.00
Treated Water		
Contract[7]	N/A	$410.00
Noncontract[8]	N/A	$350.00
Recycled Water		
Gilroy	$20.00	$80.00

[1]Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

2Half Road = Basic User (AG or M&I @ $13 or $130) + Water Master ($11.75) + Capital ($2.75).

[3]Other Zone W-5 Deliveries = Basic User (AG or M&I @ $13 or $130.00) + Water Master ($11.75).

[4]Other Zone W-2 Deliveries = Basic User (AG or M&I @ $33.00 or $330.00) + Water Master ($11.75).

[5]Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $130.00).

[6]Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $330.00).

[7]Treated Water Charge is the sum of Basic User ($330.00) and Treated Water Surcharge ($80.00/AF).

[8] Treated Water charge for noncontract deliveries is offered to all treated water contractors in the Rinconada Water Treatment Plant service area for deliveries from that facility. The charge for non-contract deliveries is the sum of the basic user charge ($330.00) and the treated water surcharge for non-contract water ($20.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation. In 1992-93, 10 percent of the Water Utility's portion of the 1 percent allocation was reallocated as part of the 1992-93 state budget. It is possible that the Water Utility will be impacted by further state reallocation of the 1 percent ad valorem tax in the future.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State Legislation allowed

the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent.

WATER UTILITY RESERVES

- **Designated for Future Years Capital**: This reserve accounts for the remainder of current available funds (or deficit) and is appropriated in support of future capital needs as projected in the District's 5-Year Capital Improvement Plan.

- **Contingency Appropriations**: Set at a fixed recommended amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year. For FY 2001-02, $1,000,000 is to be appropriated to the Water Enterprise Fund.

- **Working Capital Reserves**: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. In the Water Utility, the level of reserve is set at 1/12 of budgeted operating outlays (required under Water Revenue Bond Resolution 94-58).

- **Performance Efficiency and Accountability Program Reserves**: This reserve is established to capture the annual remaining available revenues (or deficits) not otherwise re-appropriated to restore all reserves and contingencies to their authorized amounts.

- **San Felipe Appropriation**: This is a contractually stipulated operating reserve pursuant to the District's contract with the Bureau of Reclamation for the operation and maintenance of the San Felipe Division Facilities.

- **Bureau of Reclamation Repayment Appropriation**: Established by Board policy to provide funding for the District's future contractual liability to the Bureau of Reclamation, Central Valley Project.

- **Supplemental Water Supply Appropriation**: This reserve is established under Board policy to provide funding for supplemental water purchase during periods of drought or participation in water banking or conservation opportunities.

- **Rate Stabilization Reserve Fund**: Established pursuant to the District's Water Revenue Bond Covenants under Resolution 94-58. Amounts accumulated in this reserve may be used to supplement District revenues to meet Debt Service Coverage Requirements during periods of extraordinary operating expense in lieu of a rate increase.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 acre-feet of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

RESOLUTION NO. 99-21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted:**

Policy Statement

The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

- Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.

- Protection of water quality through the purification and treatment of water and the protection of water supplies.

- Stewardship of watersheds and riparian corridor.

- Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic

water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- ***Basic Water Charge Zones***: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- ***Treated Water Surcharge***: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- ***Costs for Specific Benefits***: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- ***Balancing Costs***: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- ***Incentives***: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- ***Recycled Water***: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

Resolution Adopting "Water Utility Taxing and Pricing Policy" and Rescinding Resolution No. 96-82

3. Executive and Staff Limitations

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. Previous Policy Rescinded

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By: _____
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

Lauren L. Keller
Clerk/Board of Directors

APPENDIX C
MAPS

Water Conveyance, Treatment and Distribution System

Santa Clara Valley Water District
5750 Almaden Expwy
San Jose, CA 95118
(408) 265-2600
www.heynoah.com

EXISTING

- Treated Water Pipeline
- Raw Water Pipeline or Canal
- Injection Well
- Recharge Ponds
- Water Treatment Plant
- Pumping Plant
- Hydroelectric Facility
- Recycled Water Facility
- Treated Water Reservoir

PROPOSED

- Treated Water Pipeline
- Raw Water Pipeline or Canal

ABBREVIATIONS

(The agency indicated in parentheses owns the facility)

DWR	State Department of Water Resources
SFWD	San Francisco Water Department
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
USBR	U.S. Bureau of Reclamation
PPWD	Pacheco Pass Water District
WTP	Water Treatment Plant
City	City-owned Facility
SJWC	San Jose Water Company

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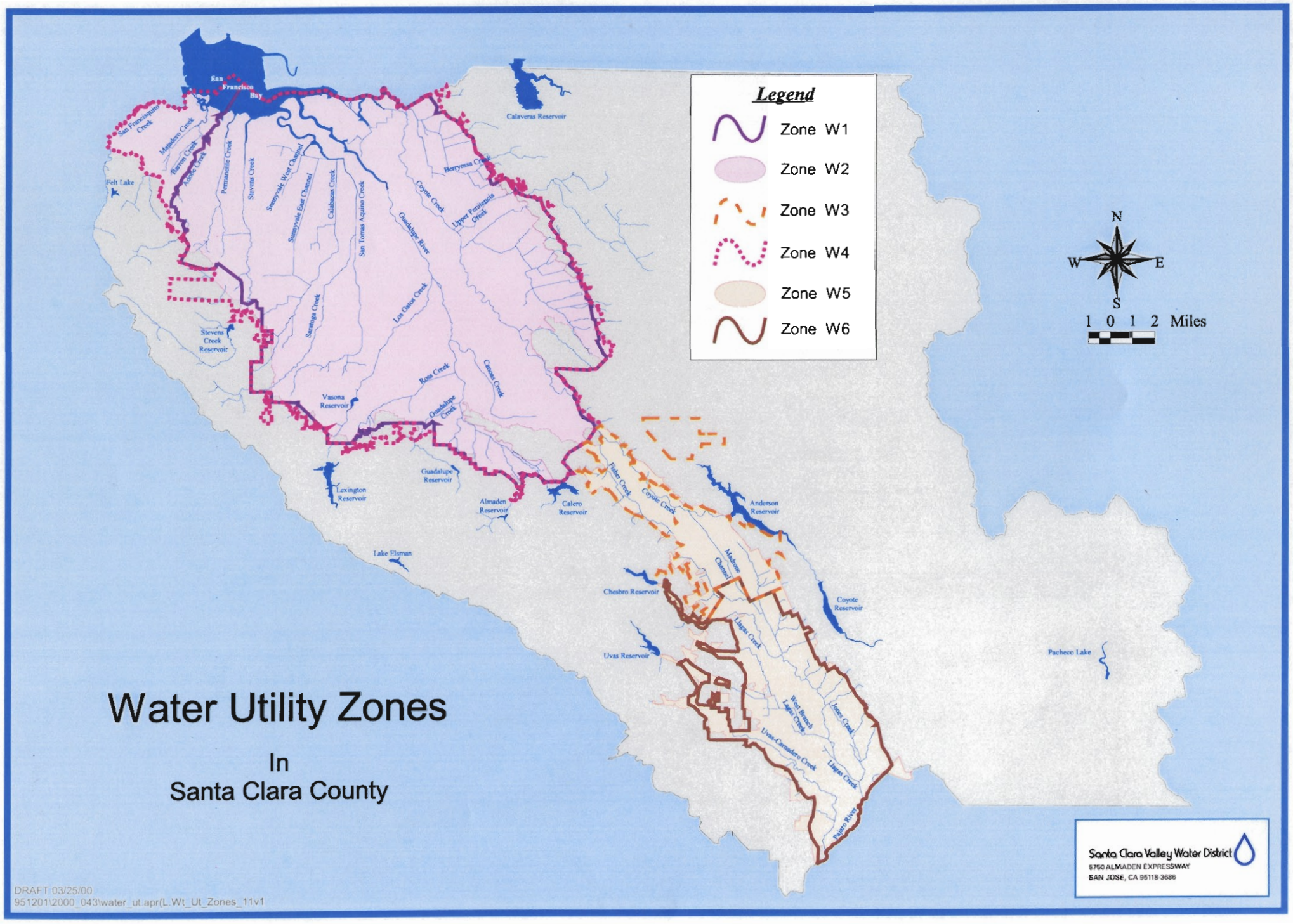
Legend
Zone W1
Zone W2
Zone W3
Zone W4
Zone W5
Zone W6
N
W
E
S
1 0 1 2 Miles
San Francisco Bay
Calaveras Reservoir
Felt Lake
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Lake Elsman
Chesbro Reservoir
Uvas Reservoir
Anderson Reservoir
Coyote Reservoir
Pacheco Lake
San Francisquito Creek
Matadero Creek
Barron Creek
Adobe Creek
Permanente Creek
Stevens Creek
Sunnyvale West Channel
Sunnyvale East Channel
Calabazas Creek
San Tomas Aquino Creek
Saratoga Creek
Guadalupe River
Los Gatos Creek
Coyote Creek
Berryessa Creek
Upper Penitencia Creek
Ross Creek
Canoas Creek
Guadalupe Creek
Fisher Creek
Coyote Creek
Madrone Channel
Llagas Creek
West Branch Llagas Creek
Uvas-Carnadero Creek
Jones Creek
Llagas Creek
Pajaro River
Water Utility Zones
In
Santa Clara County
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
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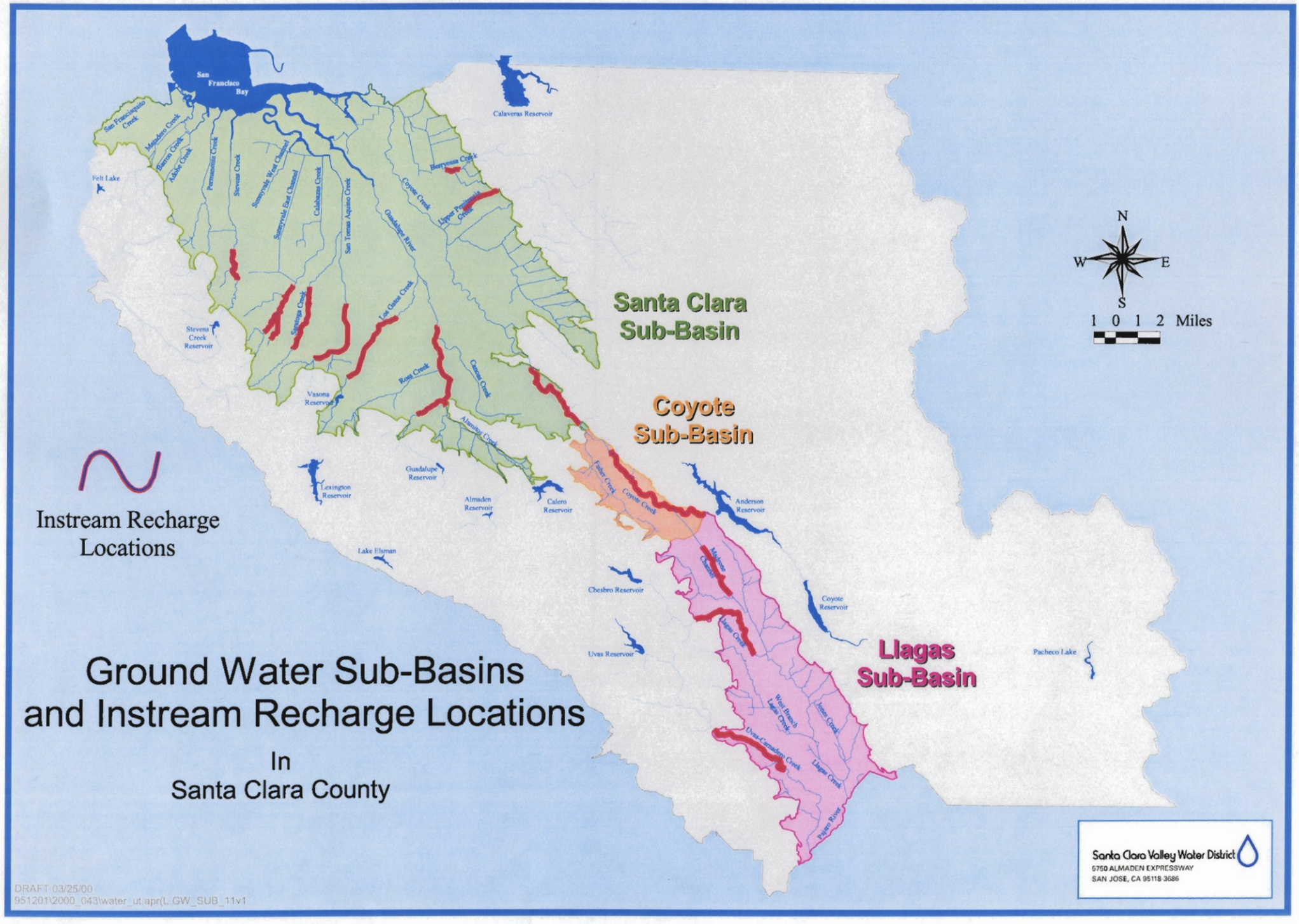
Ground Water Sub-Basins
and Instream Recharge Locations
In
Santa Clara County
Instream Recharge
Locations
Santa Clara
Sub-Basin
Coyote
Sub-Basin
Llagas
Sub-Basin
N
W
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San Francisco Bay
San Francisquito Creek
Matadero Creek
Barron Creek
Adobe Creek
Permanente Creek
Stevens Creek
Sunnyvale West Channel
Sunnyvale East Channel
Calabazas Creek
San Tomas Aquino Creek
Guadalupe River
Coyote Creek
Berryessa Creek
Upper Penitencia Creek
Los Gatos Creek
Ross Creek
Canoas Creek
Alamitos Creek
Fisher Creek
Madrone Channel
Llagas Creek
West Branch Llagas Creek
Uvas-Comadeno Creek
Isaias Creek
Llagas Creek
Pajaro River
Felt Lake
Stevens Creek Reservoir
Vasona Reservoir
Lexington Reservoir
Guadalupe Reservoir
Almaden Reservoir
Calero Reservoir
Lake Elsman
Calaveras Reservoir
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Coyote Reservoir
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SAN JOSE, CA 95118-3686
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